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ADDRESSES.

THE STUDY OF THE FEVERS OF THE SOUTH.

The Address on General Medicine, Delivered at the Forty-seventh Annual Meeting of the American Medical Association, at Atlanta, Ga., May 5-8, 1896.

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Humanity has but three great enemies: Fever, famine and war; of these by far the greatest, by far the most terrible, is fever. Gad, the seer of David, estimated aright the relative intensity of these afflictions when he made three days' pestilence the equivalent of three months' flight before the enemy, and of three (seven) years of famine. As far back as history will carry us, in ancient Greece, in ancient Rome, throughout the middle ages, down to our own day, the noisome pestilence, in whatsoever form it assumed, has been dreaded justly as the greatest of evils.

It is worthy of comment that three of the greatest benefits conferred on mankind—beside which it would be hard to name three of equal importance—have been in connection with the fevers: The introduction of cinchona, the discovery of vaccination and the announcement of the principle of asepsis. Too great a boon for a single era, these priceless gifts have been distributed over three centuries. They represent great practical applications of our art in three departments: Cinchona bark in therapeutics, vaccination in preventive medicine and asepticism in surgery. Each of the diseases thus attacked in its stronghold may be taken as a type of a great group of the fevers, the miasmatic-contagious, the eruptive and the septic.

Although in connection with the fevers the century can claim but one discovery of the first magnitude; yet the sum of progress in all directions has been vast. If asked to name the most conspicuous, those which have helped us most to fulfill our highest functions in the relief of suffering and the prevention of disease, I would say, the differentiation of the continued fevers, the enouncing of the gospel of medical cleanliness, the recognition of the microbic origin of many diseases, and the introduction of rational methods of treatment.

I have chosen to address you *on the study of the fevers of the South*, since I felt that here no subject lies so near to the general practitioner, no question requires to be so often discussed with freedom and clearness, and no place in the civilized world offers better opportunities for the solution of some of the many complex problems as yet unsolved. I shall not refer to yellow fever, that dreaded foe which each generation has had to face, happily in epidemics of ever lessening extent and duration. I can not pass it, however, without reverently paying a tribute to our colleagues who have fallen in the fight. The unselfish devotion to the good of our fellow creatures, which animates our best work, has given to physicians in every age a spirit which in times of great peril has enabled them to meet the gravest emergencies. No epidemics have blazoned forth in such relief the heroism of our fellows as those of typhus in Europe and of yellow fever in America.

The differentiation of special forms of the continued fevers, and particularly that of typhoid, is one of the most interesting chapters in medicine. "There is but one fever. Of course I do not admit of its artificial division into genera and species." So wrote the great Benjamin Rush, whose theory of the unity of fever with twelve primary states and innumerable combinations was a reaction from the complicated nosology of Cullen. Of the three generations of physicians of this century, the first never emerged from the chaos in which Cullen, Rush, *et al.*, left it; from the horizon of the second the thick clouds began to clear away; while we of the third live in the dawn, at any rate, of order.

The correlation of the fevers, the passage of one into the other, their transmutability and mutual substitution were articles of faith of our grandparents. Let me read you a paragraph from that delightful biography of John Armstrong by Francis Boott (1835), a work which should be read by Southern physicians who wish to learn how much good work was done by their predecessors in the early years of the century. "In taking, therefore, a general review of the diseases of North America, which owe their origin to malaria, we observe yellow fever almost annually epidemic at Vera Cruz, lat. 19° 11′; and that it gradually disappears in frequency as we approach the latitude of Boston, 42° 20′; that in the parallel of Philadelphia it often ends in typhus; that north of this line, typhus becomes the more frequent form of fever, till we lose all trace of yellow fever in Vermont, as a distinct disease, the symptoms of both, however, being sometimes blended in the same case; that both of them are attended, from the south to the north, with diarrhea, dysentery, cholera infantum in the summer, and in the winter and spring with a pleurisy or peripneumony, which in the south is more decidedly marked, like the autumnal fever, with bilious symptoms; sometimes, as Rush observed in 1803, with a tendency to a tertian type; and in the north, having, like its fevers, a more typhoid character, sometimes approaching to the most malignant forms of congestive fever."

The passage of remittent into yellow fever, the relations of the malarial to the continued fevers, the connection of pneumonia with malaria, were questions discussed at extraordinary length. Careless of the type, they attributed a mobility and plasticity to the individual fevers which we can not understand with our ideas of fixidness, and of a true breeding of the germs. The literature was in indirect bulk to the accuracy and positiveness of their knowledge. Vol-

umes to them were as articles to us. Take, for example, the enormous literature on the question which stirred so deeply the second generation of physicians in the South; the relations of malaria with pneumonia. What a wordy war it was! And how Manson and W. T. Howard belabored each other! René La Roche could only undertake the consideration of the question within the limits of a modest brochure of above five hundred pages! To us the crop may not seem to have been worth harvesting, but the soil left barren could scarcely have grown the grain by which we to-day live, and any student may read in the contributions between 1820 and 1860 an ever growing appreciation of the value of accurate clinical and pathologic observations.

In the study of fever the profession in the United States received during the third and fourth decades an extraordinary impulse from France. Previous to this English medicine had controlled the situation, but for years following their deaths, Hunter and Cullen had no worthy successors. No more arid period exists in British medicine than that which followed immediately upon the exit of these giants.

Laennec, with his marvelous discoveries in clinical medicine, was a ferment of extraordinary potency. To him, and later to Louis, the young men of this country turned for inspiration. While Laennec's work is eternal his career was brief, and it was particularly from his immediate successors in Paris, and above all from Louis, that American students received at this time their intellectual impulse. The introduction by him of the numerical method, and the rigid and accurate study which he made of typhoid fever, stimulated everywhere a more careful anatomic and clinical consideration of fevers of all sorts.

But Louis' work, great as it was in France, has had a far wider sphere. No European teacher has ever had so devoted or so distinguished a band of American students, upon whom was poured out a full measure of his spirit. James Jackson, Jr., Oliver Wendell Holmes, Henry I. Bowditch, Geo. B. Shattuck, John A. Swett, Alonzo Clark, Elisha Bartlett, Caspar W. Pennock, W. W. Gerhard, Thomas Stewardson, Alfred Stillé and William Power. What a splendid band! All of them "caught his clear accents, learned his great language and made him their model." Industry with accuracy, zeal with judgment, honesty with candor, characterized these men, who may be said truly to have changed the whole method of clinical work in this country. There was a certain *Je ne sais quoi* quality about this group which pertains to no other in the history of American medicine. Perhaps it is best expressed by the term *Brahmin*, as Oliver Wendell Holmes uses it, men to whom *noblesse oblige* was not mere verbiage. Alas! that but one of the group remains, full of years and honor, and as his recent address shows, faithful to the methods of his master, ever faithful to the highest interest of his profession. The work of these men has been worthy of them. I am never tired of telling the story of the differentiation of typhus and typhoid fever, in which they with a number of young men in different countries took part. I can not bore you with it here. The chief credit is due to W. W. Gerhard, of Philadelphia, but so well did Louis' pupils leaven the mass that Gerhard's paper, and the studies of James Jackson, Jr., Enoch Hale, Geo. B. Shattuck and Alfred Stillé made the distinctions well and widely known early in the forties. So solidly had the work been done, that in the first edition of Bartlett's work on fevers, 1842, we have the separate accounts just as they are given to-day; and three editions of the work had appeared before Jenner brought conviction to the profession in Great Britain.

Yellow fever is now a rare visitant in the South; smallpox occurs only in local outbreaks; typhus fever has not been seen by the present generation of physicians; cholera has not been epidemic since 1866. Gradually, but surely, the great epidemic diseases have been driven from the land. Even malaria has diminished extraordinarily in its extent and in its intensity, particularly above the latitude of Norfolk. One only of the continued fevers persists, almost, we may say, in its original vigor. Typhoid fever is to-day in the United States *the fever*, just as it was when the old New England physicians recognized its recurrence year after year with the fall of the leaves. Of no disease is the history better known; the measures for its prevention are everywhere recognized; the incidence of its occurrence is an unfailing index of the sanitary intelligence of a community. With good drainage, pure water and pure milk, typhoid fever goes the way of typhus and cholera. The greatest sanitary triumphs of the century have been in reducing to a minimum the mortality from this disease in the great centers of population in Europe. The mortuary returns of Washington and of Baltimore, and of many smaller cities demonstrate that we are culpably negligent in allowing this most easily preventable disease to continue its ravages. I estimate that in the latter city there were during the year 1895 not less than 2,500 cases.

The greater prevalence of the disease last year in many cities in the Union was associated with temporary conditions upon which I need not dwell. Certain cities in which sanitary measures have been carried out recently, as Chicago, have showed even a diminution in mortality. But to one feature in connection with the disease I should like to call the special attention of the members, viz., its increasing prevalence in smaller towns and in the country. Accurate data are impossible to obtain, as compulsory notification of cases is not carried out, but in many States, particularly, so far as I know, in Pennsylvania, Maryland and Virginia, the cities have suffered less than the suburban and rural districts. Are we not responsible, in part at least, for this condition of affairs? Have we given enough attention to local health matters? Have we preached, in season and out of season, the gospel of cleanliness? And, most important of all, have we always realized the paramount importance of neutralizing the poison in each case? There is an urgent need in counties and smaller towns of a more systematic enforcement of the laws of health. We do not appreciate here, as in England, the value of well organized health boards with properly paid officials, and with modern equipments. Rural sanitation needs reorganizing, and the increase of typhoid fever is the best comment on the unsatisfactory nature of the present state of affairs.

It is a very gratifying sign to notice the attention which has been given of late to the subject of typhoid fever in the South. Some years ago a good many physicians resented the imputation that the disease to any extent prevailed in the Gulf States. I have been in the habit for several years past of reading the reports of the discussions on this subject at the New Orleans Parish Medical Society. They have

been interesting, as showing a progressive development of knowledge, such as comes to all of us with fuller study of any problem. Enteric fever presents no constant picture; on the contrary, scarcely any disease has a more varied symptomatology. The fever may be said to be invariable, though afebrile cases are not unknown; but in the features of onset, in the length of its course, in the presence or absence of symptoms regarded as cardinal, such as rose spots, diarrhea and splenic enlargement, typhoid fever is so uncertain that the diagnosis is often dubious. We have now, as I shall mention, an unerring means of differentiating malaria, with which here the disease is so often confounded. We are still without a ready means of recognizing under all conditions, typhoid fever, a method available even for the hospital physician. Elsner's plan, if it turns out successful, will be useful where there is a well equipped laboratory, but the general practitioner must trust to his past experience, to his common sense and to his special senses to recognize the disease. Mistakes can not be avoided, and there are cases, as in every disease, in which a diagnosis can not be reached.

Advances in the treatment of fevers, and especially of typhoid, have not kept pace with the rapid progress in our knowledge of the etiology. In the present condition of bacteriology we may hopefully expect great things in the near future, but meanwhile we jog along without any fixed aim, too often carried away by winds of doctrines and wild theories. Still it is something to have escaped from the restless activities of our grandfathers. They were not all, however, of the same stamp. If I had typhoid fever and had a theosophic option as to a family physician I would choose Nathan Smith, nor would I care whether it was while he labored in the flesh in the little town of Cornish, N. H., in 1798, or after he had become the distingushed Professor of Medicine in Yale.

I know of no more graphic contrast than can be drawn between the comfort of fever patients at the beginning and at the close of the century. In illustration let me give you an account which I picked up last summer in the Medical Library at Boston, from a brochure by Dr. Gamage on the fever of 1817–18 in that city. He was describing a typical case of typhoid fever with several relapses, which occurred in a woman, whom he saw about the first of February. In the first attack, between February 3 and 28, she had seventeen bleedings, varying from fifteen to twenty ounces; in all, 167 ounces of blood were taken. She had active purgation and calomel galore. There were blisters to the neck, blisters behind the ears, blisters on the abdomen. Throughout March, April and May the patient had three, if not four, relapses, in each of which there were renewed bleedings, though the amount of blood was rarely more than four to six ounces. The purging and blistering were kept up, but there was added on several occasions cold ablutions, and thrice she had tepid baths. In the very full record which he gives of the case it is evident that scarcely forty-eight hours passed without some active medication.

Think of the misery, the tediousness, the discomfort of a typhoid case with three relapses; think of the bleedings, the blisterings, the purgings, from which at least our fever patients of to-day are free! Contrast the quiet, the care, the gentle nursing, the scrupulous cleanliness, the abundance of cold water to drink and the fresh air which typhoid patients of to-day receive. A practitioner of the Nathan Smith type, a man who has the confidence of his patients, will carry through a majority of his typhoid fever patients without a single dose of medicine, not a purge, not a vomit, not even a fever mixture. He is a patient, anxious spectator of a process he can not arrest, a watchful guardian who will know when to act with promptitude and decision and when to refrain. Would that worthy successors of this good old man (whose article on the typhous fever of New England shows him to have been a true disciple of Sydenham) were more numerous. Some of us insist, and I am one of them, that in hospital practice a cold bath every three hours, when the fever arises above a certain point, saves from eight to ten in each century of cases; while there are others—*quot homines, tot sententiæ*—who put their trust in purges, or who undertake to disinfect the twenty feet of bowel with drugs whose chief virtue is their harmlessness.

Old Dr. Gamage, whose case I read to you, with that delightful complacency which has not yet disappeared from our ranks, congratulated himself and his patient that success had crowned his efforts. He concludes his paper with the words, "thus no less than four distinct accessions of the disease occurred. That they were the effects of the spreading and augmentation of the inflammatory action is proved by the fact that the symptoms in each instance were reduced within the bounds of present safety by bleeding, and the patient allowed another chance for existence." Pity, no doubt, is the chief feeling in our minds as we read such a report; but this is our day, not his. At some future time there will come a day, perhaps, when our complacency will seem as strange, when other auditors, in another place, may express the same pity for us that we feel for our predecessors. Even Rush seems to have had a presentiment that perhaps he did not know it all, since he closes his article on the phenomena of fever with the lines:

> "We think our fathers fools, so wise we grow.
> Our wiser sons I hope will think us so."

We don't!

I must claim the privilege of a faddist to abuse roundly other faddists who do not swim in my puddle. As a strong advocate of hydrotherapy, I take especial pleasure in denouncing as heretics of the worst possible stamp, the advocates of the so-called, antiseptic and abortive methods of treatment of typhoid fever. I would place the man who does not for this purpose also give a purge, in a limbo just a little less hot, as he probably does a little less harm. It galls my kibe, too, to think that the heresy is spreading, and scarcely a week passes in which I do not receive a temperature chart of some case of typhoid fever which has terminated spontaneously, on the twelfth or fourteenth day, as a triumphant demonstration of the value of drugs which, from my point of view, might as well have been given *per cutem* in the tub. At present I am so wholly abandoned to cold water practices that I confess to be anything but an impartial critic. Still, intestinal antisepsis is not a matter for typhoid fever patients only, and now that the glamour with which Bouchard invested the subject is fading, we are getting to hard common sense views on the question. Two facts—the two grains of wheat in the two bushels of chaff—which you can winnow from the whole complex literature to date about antiseptic medication, are: First, that in such a disease as chol-

era, in which the germs thrive and grow directly in the bowel, is a failure; and second, the impossibility of destroying experimentally germs in the bowel by any antiseptic administered *per os* in harmless doses.

The advocates in this country for the abortive and antiseptic plan of treatment must bring forward a much stronger body of evidence than has been presented, and in a much more rational way, before they can hope to carry conviction to the sceptic. Indeed, more than this, they must not regard themselves as exempt from the common rules which are recognized everywhere in modern medicine as essential. If they have a jewel, why, for pity's sake, ruin it in the setting? I have no hesitation in characterizing the papers which have appeared in the ASSOCIATION JOURNAL on the question as a heterogeneous jumble, entirely unworthy of the best traditions of the profession; unworthy of a subject connected in this country with the names of Bartlett, Gerhard, James Jackson and Flint. I am not one to cry: Can any good come out of Nazareth? Nor do I hold that all wisdom is in the professorial corps. Jenner was not a professor, nor was Sims; nor am I so blinded as to suppose that we come to the end of our wisdom in the treatment of any disease; but I do insist that the advocates of any special line of treatment should, at any rate, advance their claims with some regard to the intelligence of their readers, with some regard to the ordinary rules which regulate sane men in the presentation of a subject. To assert an abortive treatment of typhoid in a case in which on the thirteenth day of the illness, and on the seventh of the treatment, a patient died of intussusception, "cured of his typhoid fever on the seventh day of treatment," so it is stated, when the autopsy showed "the characteristic and extensive ulceration of Peyer's patches and tumefied glands," is to talk a language unintelligible to an educated medical man, and is nothing short of midsummer madness. Then follows the extraordinary remark, "The history and pathologic specimens prove conclusively that one case of typhoid fever was aborted. *Ab uno disce omnes!*" Such a conclusion would insult the intelligence of a first year medical student. To speak of a case of typhoid fever as aborted, which shows on the thirteenth day ulceration of the ileum and tumefied mesenteric glands, dams, in my opinion, the whole plan as a therapeutic fake of the very first water. *Ab uno disce omnes!* Another piece of evidence is mentioned in a case in which the disease was so far aborted as to enable the patient to sit up and eat beefsteak on the tenth day. He remained well for fifteen days, and then, *mirabile dictu*, this aborted fever had the audacity to relapse! The advocates of the abortive and antiseptic plan must, 1, learn what it is to abort a disease; 2, familiarize themselves fully with the clinical history of the milder types of typhoid fever; and, 3, present their reports of cases in a manner worthy of the subject, giving details which shall enable anyone to deduce his own lesson. I honor, Mr. President, enthusiasm, and respect honest conviction, but when principles are at stake which involve the good name of my colleagues and of my profession, and still further when in my judgment the lives of patients are placed in hazard I hold it better to speak out plainly than to maintain a supine, though more easy, silence.

I have spoken of the discovery of cinchona as one of the three greatest benefits conferred upon mankind in relation to the fevers, an event fraught with more memorable consequences than any perhaps in the history of medicine. It has made waste places habitable, the wilderness to blossom like the rose, and has been one of the great factors in the expansion of European civilization. After two centuries and a half cinchona remains the only specific drug which we have in the fevers, to the action of which the pharmacopeia offers no parallel.

The clinical phenomena of malaria were better known to the old Greek and Roman physicians than those of other fevers. The writings of Sydenham and Morton in the seventeenth century, and Lancisi and others in the eighteenth century, served to give unusual fulness and breadth to the knowledge of paludism. I have read an extract from Armstrong's biography which gives an idea of the confusion which existed in the early part of the century, and which illustrates the uncertainty in the minds of the best workers just how far the malarial influence extended. In our own day the confusion has not disappeared, and until recently it was impossible to say accurately what was and what was not true malaria. So simple in some of its manifestations, so complex in others, it was quite difficult, on the one hand, to recognize all its protean features; and on the other hand, in affected districts, the tendency was irresistible to attribute to paludism any malady of a periodic type, or with specially anomalous symptoms. Confidently predicted by many, its presence formulated in as early as the year 1849, by J. K. Mitchell, the parasite of the disease remained unknown until 1880, the date of Laveran's discovery. The demonstration of the invariable presence of the hematozoa described by him is now as complete as it is possible to have anything in the range of medicine. It may be stated confidently that in no part of the world in which malaria prevails has any worker with a proper knowledge of the technique and suitable instruments failed to discover the parasites. The importance of the study from the standpoint of diagnosis can not be over-estimated. It gives the practitioner at all times and in all places an unfailing means of differentiating the malarial from other fevers. No one can now approach the study of the subject without familiarizing himself fully with what has been done on this question, and particularly upon the varieties of the malarial parasite, and the differences of type in the different forms of the disease. Though the work which has already been accomplished, particularly by the Italian observers, is far reaching and satisfactory, to some of the problems which remain I may here briefly refer.

We need more particularly a study of the condition of the blood in the irregular forms of malaria, such as prevail more particularly in the region of the Gulf States. Here at the outset the workers who have an opportunity of studying these forms are frequently nonplused by the scanty number of parasites in the blood. These are the very instances in which, as has been shown, the organisms are chiefly in the viscera, and the severity of the symptoms is almost directly proportionate to their number in the vessels of the spleen, bone marrow, intestines, brain and the other organs. There are cases in which the life of the patient depends directly upon the diagnosis, and upon the promptness with which the patient is placed under the influence of quinin, either by the hypodermic or intravenous injection.

The subject of malarial hematuria, which is year

by year discussed in our journals, has to be worked at anew from this modern standpoint. What are its exact relations to malaria? What is the form of the organism present in these cases? What are the pathologic changes in the kidneys and other organs? These are questions which await solution at the hands of expert men who have been trained in the modern methods of blood work. A practical point of the greatest importance bearing upon this question is the much debated relation of quinin to the hematuria. If the bleeding is caused directly by the presence in large numbers of the parasites in the kidneys, it runs directly counter to our knowledge of the action of quinin to suppose that it could in any way aggravate the hemorrhage. But the matter is one upon which in its present condition hopelessly irreconcilable views are held by general practitioners. The actual nature of the so-called malarial hematuria must, I think, first be settled.

Another subject to which particular attention should be given is the occurrence of malarial infection in other diseases. The coexistence of malaria with dysentery is well known. Malaria may develop in the course of pneumonia, and there may be a concurrent infection with malaria and with typhoid fever. Though undoubtedly this may happen, yet it must be extremely rare, as in the now very large number of cases of both diseases which we have had at the Johns Hopkins Hospital, all with careful blood examinations, there has not been a single instance in which typhoid fever and malaria were concurrent, although very many of our cases of typhoid fever come from malarious regions. Now that there has been such a strong reaction in the profession against the idea of the typho-malarial fever broached by Woodward, I would like in justice to that distinguished man to call attention to the fact that in his well-known paper at the International Medical Congress in 1876, he distinctly denied that what he termed typho-malarial fever was a specific fever—a new disease, but he expressly used the term "concurrent elements," and there can be no question, I think now, that malaria and typhoid fever may coexist, but also there is no question that the malarial element may be quickly and efficiently disposed of by the administration of quinin. I repeat that there is no subject to which the young physicians of the South can devote themselves with more profit than to the study of malaria from the modern standpoint. The necessary technical knowledge can be obtained by two or three months' study in a well equipped clinical laboratory. Without such training it is useless to go into the question. The whole literature of the subject is now readily accessible. The student will find in the volumes of the late Joseph Jones reference to much of the older literature, and a host of valuable clinical data collected by that most industrious observer, whose death recently we have had to lament. The New Sydenham Society has issued several monographs,[1] and in this country the monograph by my assistants, Dr. Thayer and Dr. Hewetson,[2] gives full details.

Apart from typhoid fever and from the irregular forms of fever due to malaria, is there a third type of fever in the South independent of both? This is perhaps the most important question awaiting solution in regard to the fevers of this locality. The idea of the existence of such a separate fever is not new. Armstrong held that in the West Indies there was a common fever arising from heat acting on unseasoned constitutions. The disease has received many names: *Florida fever* in Florida, the *country fever* in the Carolinas, and by French writers it is spoken of as *fièvre inflammatoire*. Guitéras, who brought to the study of the question a peculiarly intimate acquaintance with yellow fever in the tropics, and also a thorough knowledge of the common types of typhoid fever in the North, has called it *continued thermic fever*. He says: "These cases deserve to be classified as an entirely distinct group, and to my mind must be recognized as a distinct disease. I have examined some of these cases of prolonged fever of southern countries, postmortem, and have failed to find the lesions of typhoid fever; I therefore think that my conclusion in regard to these cases is a correct one. The farther south we go, the more frequently we shall find that there is a certain fever which is peculiar to the region." The literature of the subject is quite extensive, but we are not prepared as yet for a final decision of the question. The subject is of the very first importance, and demands renewed attention at the hands of those who have the opportunities. It is not in the far South only that this form of fever has been described, as shown by the papers of Robinson and Baumgarten on the simple continued fever of St. Louis.[3]

One or two significant facts have been brought out within the past few years. The careful observations made in Galveston by West and by Dock show that the two main types of fever in that city are malaria and typhoid fever. I have already referred to the discussions which have taken place during a series of years in the New Orleans Parish Medical Society, which showed a strong evidence of a belief in that city in the existence of a third type of fever. In a paper by Dr. Matas of that city, published a year and a half ago,[4] he retracts his previous opinion, after nine years' additional experience, and holds that the long-continued fever of Louisiana that resists quinin is really typhoid fever. Some of his conclusions in this matter may be quoted with advantage.

"The course of the long-continued fevers of Louisiana is not in the least altered or notably influenced by the cinchona alkaloids; *ergo*, it is not a malarial fever from the therapeutic standpoint.

"That this fever occurs at all seasons of the year, though it is more prevalent during the summer months; *ergo*, it is not a 'thermic' fever pure and simple.

"That cases of the fever occur in groups (and probably in districts), several members of a household being attacked simultaneously or in rapid succession; *ergo*, infection from a common source.

"That while the true classical and grave typhoid type of fever is exceptional and comparatively rare, it nevertheless exists in our midst in persons who are born in this city and who have never lived elsewhere; *ergo*, typical typhoid fever exists as an epidemic in New Orleans.

"In infected houses, where several cases are under treatment, it is not very rare to observe a fever of a most *typical* and grave typhoid type running through its course by the side of a benign *atypical* fever in which there are no adynamic symptoms, no diarrhea,

[1] Mannaberg, Marchiafava and Bignam.

[2] Johns Hopkins Hospital Reports, Vol. V.

[3] Transactions of the Association of American Physicians, Vols. III and VIII.

[4] Medical News, Dec. 15, 1894.

no hemorrhages; nothing, in fact, but a simple and uncomplicated thermic movement."

The question has suffered in the way in which it has been approached, and I may be allowed to suggest that those who have opportunities, both in the cities and in the country districts, should adopt the following methods:

In the first place, full clinical histories should be furnished of the cases. A man who wishes to contribute to the subject should not be too busy, not only to make a careful, critical study of the symptoms, but to jot them down in some order, so that at least they may be intelligible to others.

The second point is the necessity of obtaining autopsies in fatal cases. We all appreciate how difficult this is in private practice, but in determining the nature of obscure atypical cases of fever it is absolutely essential. There is not a hospital in the country in which the determination of the nature of obscure cases of fever is not settled by the autopsy alone.

And thirdly, it is essential that observers who undertake to study this question with thoroughness should approach it with a full acquaintance with the varieties of the malarial parasites, and with an accurate knowledge of bacteriologic technique.

Utopian as it may appear, we may look forward with hope to the day when the great enemies of our race shall be no more, when fever, war and pestilence shall cease to harass mankind.

When we glance at the progress of the century, dare we not say that at least the beacon fires of hope have been lighted? The enormous advance in material prosperity, and the closer linking of the nations which has followed the annihilation of space by steam and electricity, has made widespread devastating famine almost impossible, and has, at any rate, set a limit to the range of its power for ill.

For one only of the three great curses the close of the century brings no gleam of hope. It will be in another democracy, in another century, perhaps far distant, that the race will realize the earnest longing of the son of Amos, that "nation shall not lift up sword against nation, neither shall they learn war any more." The gradual growth of a deep sense of the brotherhood of man, such an abiding sense as pervades our own profession in its relation to the suffering, which recognizes the one blood of all the nations, may perhaps do it. In some development of socialism, something that will widen patriotism beyond the bounds of nationalism, may rest the desire of the race in this matter; but the evil is rooted and grounded in the abyss of human passion, and war with all its horrors is likely long to burden the earth.

To us as a profession belongs the chief glory of the century. Enormous as has been the advancement in material prosperity, and wide-spread as has been the diffusion of benefits from the development of the physical sciences, they can not compare with the progress which has been made in the relief of suffering, and in the prevention of disease. Our work here ranks among the most memorable achievements in the history of the race. Fever in its varied forms is still with us, and, as I said at the start, the century has seen in connection with it but one discovery of the first magnitude, but it is of almost equal importance to know that the way has been opened, and that the united efforts of many workers in many lands are day by day disarming this great enemy of the race.

THE PURIFICATION OF PUBLIC WATER SUPPLIES.

The Address on State Medicine, delivered at the Forty-Seventh Annual Meeting of the American Medical Association at Atlanta, Ga., May 5-8, 1896.

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The most vitally important sanitary problem confronting American municipalities at the present day is, unquestionably, the supply of pure water for drinking and other domestic purposes. The wide-spread prevalence of typhoid fever may be practically looked upon as a measure of the pollution of the drinking water. Depending as this disease does almost entirely upon an infected water supply, the importance of having the latter of a pure quality is self-evident. In 1894, twenty-five of the principal cities of the United States had an average typhoid mortality of 39.6 per hundred thousand of population. Those cities which had the largest mortality from this disease were supplied by a highly suspicious quality of drinking water.

It will be hardly necessary at the present day to insist upon the etiologic relation of infected water to typhoid fever. The numerous epidemics in this country and abroad, which have been studied with so much care by eminent sanitarians, have demonstrated this relation. While cases doubtless occur in which the disease can not be traced to the water supply, these constitute the vanishing minority, the overwhelming majority being unquestionably due to infected water.

In epidemics of cholera a similar relation exists between the outbreaks and extension of the disease to an infected water supply. Aside, however, from the production of these specific diseases, pure water, or water free from all sorts of uncleanness, is demanded by the "sanitary conscience" of the public.

These premises being conceded, the great importance of securing a supply of drinking water free from contamination, becomes apparent.

In sparsely settled districts, or where a supply of unpolluted water can be brought from a distance to a large community, it will probably be better to secure such a pure supply rather than purify a source of supply which has been polluted; but in the majority of instances, particularly in the eastern and central sections of this country, the procurement of such an unpolluted supply is practically barred by financial considerations. We are therefore reduced to one of two alternatives—either to limit as much as possible, or altogether prevent, which is practically impossible, the access of impurities (notably of sewage or excremental matter) to the sources of supply; or else to resort to some method of purification of the water after it has become polluted.

The city of New York has recently chosen the first alternative mentioned, by the purchase of ground immediately bordering upon the stream furnishing the drinking water to that metropolis. By the removal of sources of pollution from the area of land so acquired, the endeavor has been made to secure a pure drinking water.

I have not at hand the figures, showing the amount of money expended in order to accomplish this purpose, but the sum must have been extremely large. In Chicago, the extraordinary outbreak of typhoid fever from 1889 to 1893 led to the extension of the in-take pipes in Lake Michigan to a distance of four miles from the shore, and the consequent diminution

of the sewage contamination has reduced the typhoid mortality from 159.7 per hundred thousand in 1891 to 31.4 per hundred thousand in 1894.

In most instances, however, where large communities are supplied with polluted water, the changing of the source of supply is impracticable. A recent inquiry by a commission of engineers upon providing a new supply of water for the city of Cincinnati, has taken into consideration a scheme for drawing the supply from the Cumberland Mountains, a distance of 130 miles away. The estimated cost of this work was $27,000,000. Another scheme considered by the same commission, was to draw the supply from Lake Erie, 250 miles distant, at an estimated cost of over $40,000,000. Chicago expended $3,500,000 for the construction of the tunnel into the lake at its very doors.

These figures will probably be sufficient to show the impracticability, from a financial standpoint, of abandoning a source of water supply that may be polluted, now in use by any community, and going a great distance in search of a pure water supply. Fortunately there is at our hand, however, a means by which a source of supply once polluted can be again rendered pure: this is *filtration*.

Formerly, filtration simply meant straining out from water all gross impurities, and changing a dirty or muddy water into a clear and limpid fluid. It did not contemplate the changing of organic compounds into inorganic compounds, or the removal from the water of minute organisms, which we have learned to regard as causes of specific diseases. Our notions of what constitutes purification of water have considerably changed. We now know that water may be perfectly clear and limpid, and yet be extremely impure by reason of its content of impure organic matter or dangerous microörganisms. The results obtained by the filtration of sewage, in which a highly impure liquid, full of organic matter and teeming with microörganisms of various kinds, is rendered clear, limpid, almost entirely free from organisms and organic matter, have taught us how to purify a polluted water, which in many instances is simply a highly diluted sewage.

This method of speaking of a polluted water supply is not an exaggeration, when we study the published reports of the analyses of the water formerly used by the city of Lawrence, in Massachusetts, and now used by Jersey City and other larger and smaller communities in this country.

A great impetus to filtration was given by the experiments conducted under the auspices of the Massachusetts State Board of Health at Lawrence in that State, and carried out so thoroughly by Mr. Hiram F. Mills and Mr. Allen Hazen. These experiments, carried on with painstaking care for a number of years, prove conclusively that water, no matter how polluted, can be rendered pure by simply filtering the same through sand filters, provided certain cautions were observed regarding the construction of the filters, the rate of filtration, and other conditions varying with the character of the water to be purified.

For many years, filtration through sand has been used by European municipalities to secure purification of water. In London most of the drinking water has been filtered for upward of forty years. The filter beds of Berlin cover an area of more than thirty acres. In many of the European continental cities the drinking water is subjected to filtration. The construction and practical management of filters have been investigated with great care. Comparative studies of the efficiency of sand filters, and of various processes of so-called "mechanical filtration," have been made recently in Providence, R. I., and at Lawrence, Mass. While the results obtained by different investigators have not been in entire agreement, the prevailing opinion of sanitarians and engineers is that sand filtration, where it can be adopted, gives the best results in purification, at the lowest cost of construction and maintenance.

Koch has given the following clear explanation of the process of sand filtration:

"The problem of filtration is to purify water from the matter held in suspension. Matter which has been dissolved goes through the filter with hardly any or with no perceptible change. As the chemic investigation of water has chiefly to deal with inquiry into the constituents which have been dissolved, it can not aid in studying the processes of filtration. But in earlier days one was so much accustomed to judge the character of water according to its chemic characteristics that, in complete ignorance of what took place in the process of filtration, one attempted to test and regulate the process chemically. Naturally, no useful result ever came of this. The specialists in filtration had found this out even in early times, and had attempted to obtain aid in some other way. They tested the water in glass or metal cylinders, the so-called 'water-tests,' as to its transparency before and after filtration, and according to the result they judged of the value of the sand filters. By this simple means they succeded in discovering the most important conditions for a sufficient purification of water from its suspended constituents. From this it appeared that the real filtration does not take place in the sand, but that, by deposit from the still unpurified water, a layer of mud is formed on the top of the sand, and that this layer of mud which is over the sand, is the real filter which retains the suspended constituents from the water. In the process of filtration the important point is first that a proper layer of slime should be formed, and that it should not be disturbed during the process of filtration, and that when by further continuous deposit it becomes too thick and therefore too impermeable to water, it should be removed. According to all appearance different natural waters are capable of producing the filtering mud layer in very different degrees, according to the amount of mineral and vegetable matter held in suspension. Some river waters which are especially rich in clayey constituents can deposit a good filtering mud layer in eight or ten hours. Other kinds of water rendered more turbid by vegetable matter require a longer time, at least twenty-four hours, to form the deposit. At certain periods of the year, especially at the time of the so-called 'water-bloom,' owing to the appearance of innumerable microscopic algæ, the vegetable constituents suspended in the water are increased to an extraordinary extent and are of a particularly slimy character, and form therefore a layer which in a few days becomes nearly impermeable to water and must be removed. From these brief remarks it will appear that in sand filtration we are not dealing with so simple a matter as is often supposed. It has also been discovered that in the gradual wearing out of the sand layer it should never be allowed to get below a certain thickness, about 30 cm., and that a certain speed, about 100 mm. in the hour, must be allowed

for the movement of the water through the sand layer to obtain the most perfect purification."

Koch further states that a daily or tri-weekly bacteriologic examination of the filtered water must be made in order to test the performance of the filter. "If a filter works satisfactorily in every respect, experience shows that there will be found less than one hundred germs capable of development in one cubic centimeter of water; and this is irrespective of the number of bacteria contained in the water before filtration." The slightest changes in the rapidity of filtration, or the disturbance of the filter bed, become manifest on bacteriologic examination.

The cholera epidemic in Hamburg in 1892 furnished an object lession of great value. Hamburg and Altona both draw their water supply from the river Elbe. In Hamburg, in 1892, the water was furnished directly to consumers without filtration; in Altona, on the other hand, the water had been for a number of years filtered. The Hamburg supply was drawn from the river at a point where there was comparatively little pollution, but the Altona supply was drawn from the Elbe immediately after the stream had received the sewage of the entire population of Hamburg, numbering nearly 800,000. As a matter of fact, cholera bacteria were discovered in the Elbe water below the main outlet of the Hamburg sewers. There was every reason to expect, therefore, that the cholera would have been more virulent in Altona than in Hamburg; but the contrary was the case.

In Hamburg about 21,000 persons were attacked by cholera, of whom over 11,000 died during the epidemic. In Altona, on the other hand, there were not over 500 cases—400 of which were shown to have been importations from Hamburg, thus leaving the small number of 100 cases traceable to infection in Altona, or unaccounted for. Koch, who made a very careful inquiry into the circumstances of the outbreak at Hamburg, came to the conclusion that the comparative immunity of Altona was due to the filtration of its water supply.

Returning to the consideration of typhoid fever, we have in the United States an example of the limitations of this disease, produced by the purification of the drinking water by means of filtration. For a number of years, the city of Lawrence in Massachusetts had suffered from typhoid fever to an unusual degree. For the six years from 1887 to 1892, the typhoid deaths in that city averaged fifty annually, a proportion of 119 per 100,000 of population. In 1893, the drinking water, drawn from the Merrimac river, was subjected to filtration, and at once the typhoid death rate began to fall. In 1895, two years after the filtered water had been in general use in the city, the number of deaths had fallen to sixteen, of which nine occurred among "operatives working in certain mills where unfiltered water was used for washing purposes, and was used for drinking by the operatives, notwithstanding the prohibition of such use, because the river water was more accessible than the city water." (Quoted from a paper by Mr. Allen Hazen in the *Health Magazine* for March, 1896.) In two cases, the disease was believed to have been imported, and in five, the origin was not accounted for.

The conditions, under which filtration takes place, have been studied particularly in the experiments made at Lawrence, above referred to. Without going further into the details of the construction of filters, two processes must be kept in view—one, the removal or straining out of the bacteria, always present in water; and the other, the oxidation of organic matter, and its conversion into inorganic compounds. These imply, that the materials, of which the filter is constructed, shall be sufficiently fine to hold back all suspended matters, and that a sufficient supply of oxygen shall always be present, in order to allow the oxidizing processes to go on. In most natural waters there is a sufficiently large quantity of free oxygen to allow the oxidizing processes to go on continually, but in cases where the water is highly polluted, it is necessary to permit access of extra quantities of oxygen, in order that all the organic matter may be oxidized. This may be accomplished, either by aeration of the water before filtration, or by carrying on the filtration intermittently, allowing the air to penetrate the interspaces in the filter before the water is again turned on the filter. This is in effect what is done in the intermittent filtration or the broad irrigation of sewage.

In the experiments at Lawrence, it was found that an average of 98.54 per cent. of the bacteria found in the river water were removed by filtration; under favorable conditions, *i. e.*, with filters of the best construction, and a moderate rate of flow—less than 1 per cent. of bacteria remained in the water after it had passed through the filter.

Within the last two years an extended series of experiments upon filtration with so-called "mechanical filters" were made in Providence, R. I., with the view of adopting a system of filtration combining efficiency with economy. The apparatus most thoroughly tested is known as the "Morrison filter," and its construction is described as follows:

"The filter bed of crushed quartz was two feet, ten inches in depth, supported upon a base of iron with circular perforations of about four inches in size, which were covered with screens. The crushed quartz used was the 'effective size' of 0.59 millimeters. The filter was washed by a reverse current, which caused the quartz to boil. The agitation and friction of the particles were increased by means of a rake with long teeth, which revolved about a central column in the filter; the rake penetrating the bed by a screw motion from top to bottom." One-half grain of basic sulphate of alumina was used to the gallon of water filtered, in order to produce a film upon the surface of the filter. This constitutes the real filtering layer, corresponding to the mud layer in the natural or sand filter.

The results obtained in these experiments showed that with careful management, from 92 to 99 per cent. of the bacteria contained in the water could be removed by mechanical filters. Further investigation demonstrated, however, that the installation and management of these filters would be more expensive than sand filtration, with no increase in efficiency.

On the whole, it is probable that sand filtration, having been thoroughly tested both by experiment and practical experience, must be regarded as the most efficient method of purifying a polluted water supply; and that, when carefully and intelligently managed, it can be depended upon for purification has been shown in the experience of Altona and Lawrence.

Did Not Know Him.—Professor Giesler, of Göttingen, has twenty-four children. He saw a child crying in the street and asked: "What is the matter, little boy?" "Don't you know me, papa?" said the boy. He was one of the twenty-four.

CONCERNING MEDICAL LANGUAGE.

Delivered at the Meeting of the American Medical Editors' Association, held at Atlanta, Ga., May, 1896.

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One of the most amusing inconsistencies of a small class of minds otherwise progressive, scientific and rational, is their unreasoning conservatism concerning the spelling and use of certain words. In any other subject, for instance therapeutics or surgery, they will welcome investigation, and further it, admitting the duty of improving upon the old, and of pushing on toward a more simple and perfect science. But when you suggest that language, the tool of thought, deserves consideration, is very clumsy and archaic, is capable of being improved—at once they shrink and are shocked at your temerity.

This attitude of hatred of innovation in one single field of human activity, while admitting the law of progress in all other departments, is also coupled with a second inconsistency; a dogmatism of conviction that the change or modification of language urged is barbarous, almost sacrilegious, that you are a sort of ill-bred upstart in advocating it, and that the old form you desire to supplant is the correct one, while your new-fangled thing is absurd and is born of ignorance. The bigotry of the average Englishman in these matters is a charming exhibition of medieval-mindedness translated to an age of civilization and progress. He actually thinks that the spelling-reformer, however infinitesimal and microscopic the spelling-change advocated, is the product of "Americanism," and of American ignorance of how to spell. The American inheritor of the English dogmatism tries to hide his feeling, shrinks from such laughable exposure of his own ignorance, and even covers the sheep-skin of his ignorance with the lion-skin of erudition. I shall not soon forget a contributor whose English was equal in barbarity to that of our average senator, whose spelling by any standard was atrocious, and whose medical ideas were of course on a par with their means of expression; but he was certain of one thing, that he wanted hemorrhage "spelled rightly, with *æ*." This to him was the symbol of scholarship—his nose was safely in the sand of erudition, but his whole body was delightfully visible.

I have had the pleasure of replying to but three or four critics of a few tiny philologic reforms or changes that seemed to me wise. Beside these four the world seems content either to accept or to reject in silence. I was struck by the fact that in all four of the speaking objectors their objections were solely based upon two foundations: Their personal dislike of change, and their complete ignorance of philology. Concerning the argument, *de gustibus*, there is surely no discussion, because taste, proverbially, is simply a subjective affair. But dogmatic opinion upon a subject in dispute, the deeply-rooted dogmatism upon things without a single minute's study of them or of their history—this in a supposably scientific man is—well! let us call it deplorable. It is amusing, even instructively amusing, but it is, once more, deplorable. Such a person, if a surgeon, would be shocked if you asked him to pronounce dogmatically upon an unstudied question of therapeutics or of mental disease, or if a diagnostician he would not express the least judgment as to cataract extraction, etc., but without an instant's study of philology he settles a philologic dispute off-hand and forever. Five minutes of glancing through any one of the hundreds of books on the subject would have closed his lips, but that does not give him pause. He is sustained by the fact that "the English language as now written is good enough for me," and there float through his mind hazy ideas that etymology demands the present method, and that at best you are a very bothersome and conceited person.

To one who has pondered the subject, however little, it must be painfully apparent that every other product unconsciously developed in the evolution of the race, whether plows, guns, matches or books, has been found capable of betterment, and all civilization consists in improvement of or improvement upon the crude devices of early awkwardness. Why should language then be an exception to the rule? Those who have examined carefully aver that our language is a sorry instrument of thought, and bears about the same likeness to an ideal language that a hand-sickle does to the best reaping and binding machine of our day. It is plain, therefore, that the obstinate prejudice against any change whatsoever in it is most ill-advised and unreasonable.

We do not advise radical changes. The proper attitude of mind is one that welcomes slow and slight changes toward shortening and thus lessening the severe burden of education, and the expense of printing. Reform has a double motive here, psychologic and commercial. It has been estimated that our outrageous spelling costs one year of school-life of every child. The financial saving by lessening every printed page one line would probably pay the expenses of our government, and perhaps retire on a life-pension the Senate besides. This line could be saved, and at least a day or two of the wasted school-life spared by abolishing *æ* and *œ*, by lopping off a few redundant tails of words, and by observing a half-dozen little rules—all of which are not only advisable but philologically necessary, not only not improper but genuinely proper.

As to *æ* and *œ*, these diphthongs are difficult to write, and they are against the genius of the language. They have already been sloughed in a large number of words, and those who oppose what they are pleased to call "the mutilation of our beloved language," must answer our demand for a rule. Shall we reinsert the *æ* and *œ*, in words at present spelled with *e*, and which were derived from older words spelled with the darling diphthongs? And if you spell *hæmorrhage*, will you, as you should, pronounce it hĕ′-mor-āj? It seems to me the etymologic sticklers are false to the old love, however true they may be to the new. Most of our words, for example, beginning with *pre*, are derived from the Latin *præ*. There are possibly a thousand of these words, such as *prescription*, *prepuce*, *pretend*, *preference*, etc. Shall we spell them all *præscription*, *præpuce*, etc.? Shall we also be (etymologically) correct and write *hæresy*, *hæretic*, *anapæst*, *pæony*, *phænomenon*, *mæander*, *hæmatite*, *æther*, *dæmon*, *æsthetic*, *aphæresis*, *diæresis*, *archæology*, *palæography*, *gangræne*, *pædobaptist*, *cænobite*, *cæmetery*, *cælestial*, *œconomy*, *epicœne*, *œsophagus*, *phœnix*, *solœcism*, and hundreds of derivatives and similar words as they are here written? Will you spell *diocese*, *diœcese*? Will you spell *fancy*, *frantic* and *frenzy* with a very etymologically proper *ph*, instead of an incorrect *f*? If so, your phancy will make your readers phrenzied, and you phrantic, I fear. Will you write *tansy*, *treacle* and *treasure* with a *th*? If so, lay up your threasure in heaven, and

drink much threacle and thansy while your days do last.

Etymologic spelling is a long-exploded absurdity. It has led many a poor word-grubber into the quagmires of absurdity. It was, says the great English etymologist, a sort of mania in the sixteenth century, and has thrown confusion and ridicule into the study of language. "Its ignorant meddlesomeness introduced many false forms," so that now hardly any word tells its genesis or history by its written form. Every word must be examined separately, its changes both of form and sound must be studied historically, before we can know much about it. The final dictum of Skeat is as follows:

"The shortest description of modern spelling is to say that, speaking generally, it represents a Victorian pronunciation of 'popular' words by means of symbols imperfectly adapted to an Elizabethan pronunciation, the symbols themselves being mainly due to the Anglo-French scribes of the Plantagenet period, whose system was meant to be phonetic. It also aims at suggesting to the eye the original form of 'learned' words. It is thus governed by two conflicting principles, neither of which, even in its own domain, is consistently carried out."

It may be said that as many of our medical terms are not derived from the Greek or Latin by a real and historical process, but are *de novo* creations, using the ancient roots and stems as convenient materials of coinage, the objection does not hold, and that our words do therefore show their originals by their form. Alas! not even this poor excuse bears scrutiny. The centuries have infected the modern word-minter, and the inevitable hurry and destiny of evolution will not let the need of condensation rest. Even while we look at our printed dictionary the Zeitgeist is telescoping our words. Who now says *thyreoid* and *chorioid?* These forms are perfectly proper, and your dictionary-man with the awful sword of "etymology" and conservatism held across his path may be forced to write them so, but he smiles sadly as he does it and shakes his head despondently. Every one of the hundreds of words ending in *-oid* is derived (supposably) from the Greek εἶδος. Why, then, is it *-oid* and not *-eid? Bulb* and *Bulbar* should be *bolb* and *bolbar*, as they come from βολβός. *Croup* is from A. S. *kropan*. How can an etymology-lover write *hyoid?* What resemblance is there to the Greek word? Our convenient compound word should etymologically be spelled *thyreohyoeid*, instead of *thyro-hyoid*. Why is one who forbids one literal iota of change in present words so utterly indifferent about the changes that have already crept in in the past? There are thousands of words in which Greek *a* has been changed to English *e*, as, *e. g.*, all the words ending in *rhœa*. He is wrathful because one wants to change them to *rhea;* why not so to those who changed the original *i* to *e?* He is as idolatrous of his beloved thousand *hæms*, but the Greek was *hai* and not *hæ*. One of the most ludicrous instances of this imaginable is the very new coinage which its author spells *carliotomy*. The anger of enraged Jupiter was as nothing to that aroused by the suggestion to shorten it to *celiotomy*. But in that word as given out, there is, "once you trip on it," perhaps not "twenty-nine," but at least two or three "distinct damnations, one sure if another fails." Why in the name of holy etymology, if derived from Greek κοιλια do we have *c* instead of *k*, and why *ca* instead of *coi-?* If the *carlia* is derived from the Latin, then why the hybrid? Surely one who pretends passionate devotion to pretty Ettie Mollie G., must not at the same time be paying court to her hated rival, the little illegit Miss Hybrida.[1]

Every page of the dictionaries proves the absurdity of trying to make spelling teach etymology; and it is a fact that not anybody, certainly not spelling-reformers, more certainly not the conservatives, cares two beans for the etymology. If we did not have the printed word to stamp the coin it would be a different matter, but with dictionaries everywhere to give the origins and histories of all words, what imaginable service or usefulness is there in the attempt to load each down with its biography? In reading or speaking no one can think or wishes to think of the root thousands of years old. As well demand that your bouquet of roses shall have their roots and soil. The investigating botanist may do so, and may know all about the root and branch and stem, but work-a-day folks are not botanists or radical philologists. If one in reading had to know or keep in mind a half-conscious recognition of the etymology of each word, he would be able to read about one book a year, civilization and science would stagnate, and we might, could, would, or should all become Congressmen, millionaires, or jingoes.

The only proper and sensible purpose of spelling is its phonetic purpose. All the philologic tories of all Christendom or heathendom combined can not prevent the inevitable modifications—even entire changes of the spoken sound. In that witches' cauldron of modern English, especially the medical variety, we have from every source cooked a most remarkable hodgepodge of illogic and inconsequential conglomeration. Our ancestors have commanded us to eat of it, but do not let us choke it down, hiding our tears of disgust, and vowing it is incomparably toothsome. We assuredly should not with glee add more of the worst to the olla podrida, and when we have a justifiable opportunity to make it a millionth part better, we should not set up a cry of revolt, and cry, sacrilege! In an African forest the trail or pathway has constantly recurring detours, angles and curves, so that one walks about twice as far as necessary to reach land's end. No object prevents following a straight line. Why is this? It is because once a tree blew down here across the path, there a limb broke off, there a stone rolled down. So the savage went around these objects, forming a new and crooked path. When the termites devoured the tree the new trail was more worn than the old one, and with thoughtless imitation the men kept on laboriously winding and twisting their way instead of going straight on and across. It is the barbarian's habit of mind to keep on the unreasoning way his predecessor traveled. It is the essence to make straight the way. The incongruities of medical nomenclature and the stock-still standing of irrational conservatism lead one to wonder if we are ever to awaken to the need of philologic civilization. No judicious reformer asks for revolution but for evolution; we need be in no hurry; we should not make profound or radical changes, because (and only because) it is impossible to bring them about; but when men oppose every jot and tittle of change, when they fight against one single conscious change of precisely the same kind as

[1] Another sorry neoplasm is *uranalysis*—"analysis of ur"—to replace an equally absurd word, *urinalysis*—"alysis of urin." We have looked in vain for the words *alysis* and *ur*.

has already been a thousand times unconsciously wrought, then surely one must with open-eyed astonishment ask: Really, now, were you not born in Africa?

I wish again to emphasize the limitation that we do not advise one clean straight jump into phonetic spelling, simply because it is impossible. We seem like some mothers—the uglier and sicklier our orthographic child the more we love and cherish it. The maternal love is wise, but the other is a mania. Turn to Germany and what do we find? So far as phonetic writing is concerned their language was already marvelously perfect, but because it was not entirely perfect the Germans within a few past years have made it so. With us, whose spelling is the butt of the world's ridicule, with us we shriek our parrot-anger or growl our ursine bigotry if one suggests lopping off a supernumerary finger from our hideous teratologic thing. What kind of a nation is this Germany? Well, for one thing, she delights to pay her debts with value-received, while another nation we know of, from the hollows of lost manhood and polite poltroonery, squeaks and squizzles its senatorial sixteen to one. Another thing about this foolish Germany is that when a foolish nation attacks her, at once her edict of blood and iron goes forth, and in a hurricane of heroic energy her legions sweep resistless over a conquered land into the capital city of the world, and crown her emperor there in the coronation halls of dead Bourbonism. How is it with another nation? To show our braggart boorishness we intermeddle in another nation's rebellion, or we espouse the cause of a half-barbaric folk thousands of miles away, for whom we do not care a fig, against the world's one great civilizing and colonizing nation, and with a corporal's guard of 25,000 soldiers cry, War, War, War! How is it with Germany as to science generally, and education, and especially as to medical science? The thousands of our young men sent to her laboratories is sufficient answer. Well, this nation, as I have said, in a few years, and at one sweep, has cut the Gordian knot of spelling, simplified and shortened education thereby, and while we are squirming and making wry mouths over a few paltry and insignificant changes, she has wholly reformed the language that Gœthe and Lessing wrote.

One of my four kind critics once wrote me remonstrating solely, on the ground of euphony, against cutting the *-al* off the tail end of many adjectives: "He didn't like it," he said, "it didn't sound well." He seemed wholly forgetful that the over-long tail of a thousand such words had already been lopped off, or perhaps had never grown out. In some countries the sheep's tails are so long that they hitch a tiny wagon to each animal, so that it hauls its caudal extremity instead of dragging it on the ground. Now the difference between these sheep and our medical Bo Peep *al*-pacas, is that the words grow no valuable wool on their tails, and that we trawl them on the ground behind us as the ladies do their dress-trails. Sheep and words and ladies are alike in the one important respect that, in the poet's immortal lines, we let them alone and they surely come home, dragging their tails (and much else also) behind them.

To my genial critic who wished his words and sheep (his ladies, too, I wonder?) to have tails and trails twice too long, I sent the following skit, to illustrate the already recognized fact of the redundancy of many word-tails, and to suggest that we either retail all the short-tailed curs, or that we curtail all the long-tailed puppies. Either one thing or the other; if you refuse to say *chemic* and *theoretic*, then you must not say *scientific* and *hydrochloric*. If you make us say *chemical* and *theoretical*, then, like a sucking dove we will roar you for consistency and ask that you be *scientifical*, or else we will prescribe *nitrical* and *hydrochlorical* acid for your alarming *gastrical* torpor and obstinacy. My strabismic letter to my friend was as follows:

Some Scientifical Difficulties. The patient was at the Polyclinical Hospital—a very sick man; he was ascitical and cyanotical; he had an anemical (dicrotical or anacrotical) murmur; splanchnical and splenical dullness was pronounced. Neither the allopathical nor the homeopathical consultants could determine whether the affection was of extrinsical or intrinsical origin, whether anabolical, katabolical, atrophical, septicemical, lithemical, luetical, hemical, hemolytical, thermical, tabetical, hepatical or encephalical. The specialists were called in, and laryngoscopical, ophthalmoscopical, gynecological and otoscopical examinations were made. The laryngoscopical man said a diphtheritical membrane was forming, and the phrenical nerve was pressed upon. The next averred the difficulty was esophorical or exophorical, that a blennorrhagical inflammation, perhaps a rheumatical iritis existed. After an endoscopical examination the gynecological expert said pelvical (or pubical) disorder was present, and a bad cystical, spermatical and chorionical state of affairs. The ear-man claimed that the disease was specifical, that the otical ganglion was syphilitical and its condition pathognomonical. The diagnostical and prognostical difficulties were certes becoming most prolifical!

As to therapeutical measures, one advised cardiacal and tonical treatment, another hypodermical; one thought hydriatical methods good, another antiphlogistical, while still another suggested hypnotical and soporifical agents. Galvanical and faradical electricity, as well as statical and franklinical, were advised. The surgeon after a diagnostical incision (under anesthetical precautions) spoke of a plastical operation. Caustical applications to the throat were considered good, and the exhibition of prussical, or of borical, nitrical and hydrochlorical acids, perhaps also carbolical with malical and acetical acid drinks. The general physician thought antineuralgical and antirheumatical prescriptions sufficient, but the obstetrician would have added oxytocical ones.

The patient died of *al*-coholical paretical dementia, superinduced, it is thought, by despair at the orthographical and phonetical conservatism of progressive Americans.

To make short work of it, the essence of the matter concerning *-ic* and *-ical* is this: Both of the suffixes, *-ic* and *-ical* are terminals, the significance of which is to give an adjectival meaning to a word. To add them both to one word is to contend that dogs and sheep should either have two tails, or that one tail should be twice as long as normal. If the suffix, *-ic*, gives the adjectival meaning, why add a second? The French, from whom we get many of the *-ic* terminations, find it unnecessary to add an *-al*. If a word is an adjective can you make it more so by tautologic caudalizations? (There are a few words whose stems end in *-ic*, such as *vesical*, *clinical*, *logical*, *finical*, etc., and these require the *-al* to make them adjectives; but these are provings of the rule, and the query why you don't say *vesic*, *logic* and *clinic* is the prompting of thoughtlessness. I would not object, however, in the least to clipping these also.) If a word needs two adjectival tails why should we not say *bestialic*, *lincalic*, etc.? If these were admitted of course the *-al* lovers would have to add their pet to the word, and we should have *beastialical*, *lincalical*, etc.; each sheep would then require two toy-wagons. This reminds one of the wonderful word, *pockethandkerchief*. The primary good word was *kerchief*, a head-covering. We now call a piece of lace or linen a pocket-hand-head-covering. I am not unmindful of

the hyperfinical distinction that some hyperfinical folk have sought to establish as regards *-ic* and *-ical*, *-ac* and *-acal*, that the *-ics* and *-acs* denote primary objective attributes of or pertaining to the things, whilst the *-icals* and the *-acals* denote secondary qualities—of the nature of or connected with the attribute in *-ic* or *-ac*, i. e., more remotely and subjectively relating to the thing. For example, a *cardiac valve*, the *cardiacal qualities* of a drug; a *historic answer;* a *historical treatise;* a *comic paper;* a *comical idea.* But this contention is impossible of realization—1, because hundreds of words by custom have become absolutely limited to either form singly and alone; 2, because not even the best writers observe the distinction; 3, it is altogether too fine a distinction to be made by the ordinary workaday humanity; 4, it would not satisfy the *-al*ophiles, who want the *-al* on the end of some of their words, without question, forever and ever, world without end, Amen! Think of saying *Arabical, Teutonical, Celtical*, etc.! We should of course have to adopt *beastialic* and *beastialical* (or bestic and bestical), *clinic* and *clinical, syphilitic* and *syphilitical*, and so on to the end. It is quite plain this system-mongering and analogy-craze leads us into sorry plights. In fact, it should be apparent upon a minute's reflection that in a language so utterly composite, illogical and non-systemic as ours, the argument from or for analogy is absurdity itself. In one respect this is an advantage, because when we can succeed in battering down the dead wall of ancient prejudice, and explode the arsenal of etymological spelling, then we may bring some order and sanity in the rebellious mob of English words.

Of one thing we may rest assured: All the tory immobility of all the world can not prevent change. It is as useless to attempt it as to try to stop the rising tide, or to stay the resistless and silent forces of evolution itself. It is the part of wisdom to guide evolution, not to fight it to the death, to guide language-evolution in the interests of brevity and perspicacity, not to cling irrationally to the old ways which clear vision may clearly see are doomed. The language of Chaucer, and even of Shakespeare, as shown in the original forms, is an utterly different language from that we speak to-day. The ordinary American, if he could hear Chaucer speaking, or if he could listen to a phonographic repetition of his actual speech, could not understand a sentence, hardly a word of it. The printed form can not bind the ever-fluctuating pronunciation. The province or function of the printed (or written) word is to stand as a symbol or visible analogue of the spoken word. Etymology to the dogs! Printing makes certain a record of the etymology, but to seek to clog the word itself with it is the worst of delusions. Our duty scientifically, sociologically, and philologically is to keep the printed form plastic. The crystallized language is a dead language, and when there is no plasticity of language there is none of the minds and civilization of those who speak that language. There is a subtle, but all-powerful reaction and retroaction of language upon mind. Men progressive in science and sociology must be progressive in language and the use of language. Prick a German word and it bleeds. There is the pulsing heart of meaning behind it, flooding it with sanguine significance. French words, and the Greek-derived or Latin-derived words of our own tongue are as bloodless, dead and meaningless as are to us Chinese pictographs. The comparison of the large, plastic, energetic, capable German with the narrow, crystalline, stationary, incapable Frenchman must at once spring into view, and the prophecy is clear as to which one is to inherit the future. The French birth-rate is about equal to the death-rate; that of the Teuton is far in excess. Do you believe in progressive Teutonism and Anglo-Saxonism, or in reactionism, toryism, and ultramontism? Choose your partners, gentlemen. Your choice in so little a matter as the use of words will tell the plain story of mental bias, quite as well as the choice of religion or of political party.

Specifically, the microscopic modifications I have urged here are as follows:

1. Abolish in English words the archaic, unnecessary, bothersome *æ* and *œ*, supplanting it by *e*.

2. Cease adding the tautologic *-al* to adjectives having already one adjectival suffix, *-ic*. It is already done in thousands of words; finish the job.

3. Drop the useless hyphen in words whose parts are derived from classic languages. In ten thousand words you have already done so; finish with the rest. But retain the hyphen in such compound terms as express a single idea by two semifused English words, especially when both are nouns. E. g., say *antitoxin* (not *anti-toxin*), *culdesac* (not *cul-de-sac*), *postmortem* (not *post-mortem*), *ventrofixation* (not *ventro-fixation*), etc. Keep the hyphen, because it is necessary to avoid confusion and doubtfulness of meaning, in *curet-spoon, heart-murmur, skin-disease, sleeping-sickness*, etc.

4. Drop the useless *-te* from *curet, brunet, fourchet, etiquet, cigaret*, etc. You have already lopped it off from *cutlet, doublet, quartet, quintet, sextet, septet, racket, minuet, fillet, corset, stylet, tourniquet, bouquet*, etc. Finish the job.

In the same way cut off the useless *-me* from many words, writing *program, gram, centigram*, etc., just as already we do *telegram, anagram, diagram, epigram;* let's make an end of it.

5. Use figures instead of spelling out numbers, at least those above ten.

6. Anglicize foreign terms when a goodly proportion of your readers will not understand them in the originals. Use italics as little as possible; use as few foreign words and terms as possible, because the vast majority of your audience can not understand them (even if *you* do); and because there is a deal of silly conceit in airing exotics of speech.

7. As to the spelling of chemic terms, accept the recommendations of the American Association for the Advancement of Science, which after years of dispassionate investigation advised that we drop the final *e* in *bromid, iodid*, etc., and in *bromin, iodin, atropin, quinin*, etc. Say *phenol* instead of *carbolic acid, glycercol* instead of *glycerin*, etc.

8. Abolish all diereses and accents. They can not teach pronunciation, and they are useless luggage. Let us write *oophorectomy, cooperation, ptomain, leukomain*, etc., without the diereses. When a foreign word is Anglicized let us do it completely, and not drag over into our domain the exotics of foreign habit, leaving it, *e. g.*, neither English nor French. Leave to the poets the acute, the grave, and the circumflex accents, that are foreign to the spirit of our own tongue.

9. Do not bother about hybrid terms. A mule is a better animal than either its father or its mother. It is only finicky sticklers that are horrified by hybrid words. There are many, many thousands of them in

our language, good words too, that have been used for centuries, and that always will be used. There is no earthly objection to them,—and indeed, we should rather welcome them if they are good words, expressive and short. More than any other language ours is adapted to receive them and use them, and there are more of them in it than in any other language. Instead of being ashamed of the fact we should be proud of it, as it shows our receptivity and plasticity. If we are bound to have the defects of our virtues, let us not be ashamed of the virtues of our defects.

Finally, I would beg that you carefully consider the source and secret reasons that exist for opposition to the foregoing recommendations. Ignorance, colossal, imperturbable, impertinent ignorance is characteristic of much of it. Read, for example, the letters in the *British Medical Journal* from correspondents (not editorial utterances, because the editors know better, and have publicly advised dropping the *æ* and *œ*), and you will see these objectors haven't studied philology five minutes in their lives, and are living in an antediluvian world.

But, again, consider the source, I beg of you, and you will very often find that it is the secret influence of the commercial medical publisher that is at work. He publishes a dictionary committed to the old ways, and hence prints his medical journals and books in the archaic language of his dictionary. It means expense and loss of money to him in very many ways to have his "authorities" supplanted. The astute editor of the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION has caught this aspect of the matter, and an editorial in the issue of Feb. 8, 1896, happily sets it forth. It becomes an important concern of the profession whether it has any scientific and literary rights, and if it shall govern itself or be governed by its publishing servants, very accommodating editors, and self-interest generally. What an instructive fact it is to see a journal that has once been taught how to spell, go back under the domination of commercialism to the "flesh-pots of Egypt." In this connection it is worthy of note that the two considerable journals of the United States *not* controlled by the commercial publisher, the *Boston Medical and Surgical Journal* (representing the best literary and scientic culture of the Eastern States) and the JOURNAL OF THE ASSOCIATION representing also the enterprise and freedom of the Western and of all States have long ago adopted and do now use the more progressive methods of spelling. The same practice on the part of many other reputable journals, and the unanimous acceptance of it by the American Medical[2] Editors' Association three years ago—these and more, are most encouraging proofs of our freedom from prejudice and dogmatism, and that we are alive to the demands of literary as well as scientific progress. The suggestion need hardly be added that as without payment we give our articles, the product of our laborious lives and our devotion to nonmedical men, out of which they make fortunes, it hardly becomes them to dictate to us as to literary and scientific matters. If you contribute to these journals you have a perfect right to demand that your ideas of language shall be followed in their printing. Accompany your article or book with the condition that your choice of spelling-methods, etc., be carried out.

[2] From *The Medical News*, June 17, 1893, I reproduce from the paper read at the meeting of the American Medical Editors' Association in Milwaukee, June 5, 1893, the following sentences:

(a) Of all the languages of the civilized world there is none that in the most distant manner can rival the English in the ludicrous illogicality and wretched lawlessness of its orthography. In other languages there is a manifest philologic sanity that evidently seeks to hold the written (or printed) word in some sort of relationship with the spoken word. But in our language the reverse seems to be the case; the more methods in which a single sound can be spelled the better it seemed to please the fathers of the language. As Professor Lounsbury says: "There is nothing more contemptible than our present spelling, unless it be the reasons usually given for clinging to it."

(b) The labor which this fact imposes upon the child's mind, and upon all minds that, so far as language learning goes, persist in the prepubertic stage, is a labor that conceived in its entirety is literally appalling. The German child learns in one year, and well, what the English child learns in three and poorly.* It is so tremendous a labor that even few educated men reach unconsciousness and ease of orthography, and for the great mass of people it is a constant source of worry or chagrin. To a vast number of people the secret consciousness of their orthographic failing keeps them from the pleasure of writing and composition, or prevents them from profitable employment. To every person that writes, the excess of labor required by our barbaric spelling is a huge waste of time and a heightener of the friction of life. With the correlated barbarism of pronunciation, it is the greatest obstacle to the spread of English as the world's great, sole tongue.

(c) The foregoing facts are so incontrovertible that no one who has even cursorily looked into philology and pedagogics has any tendency to deny them. Equally certain is it that all of our great students and masters of philology are entirely agreed as to the tremendous importance of lessening the burdensome labor of education, and the friction of life, by some approach, great or little, toward the phonetic spelling of English words. As succinctly stated in his preface by the learned editor of the great *Century Dictionary*: "The language is struggling toward a more consistent and phonetic spelling, and it is proper in disputed and doubtful cases to cast the influence of the dictionary in favor of this movement, both by its own usage in the body of the text, and at the end of articles by the order of forms or the selection of the form under which the word shall be treated."

Never has more capital been invested in similar enterprises, and never has more philologic erudition been gathered to the service than in the editing and publishing of those splendid lexicographic monuments of American scholarship, the *New Webster*, the *Century* and the *Standard* dictionaries. It is equally true that in each case the most earnest desire of the men in charge of these works has been to go to the furthest admissible limit dared in recommending the shortening and rationalizing of the spelling of English words. They have only stopped when and where they thought further advance would result in a balking, and a refusal of the people to follow.

Words fail me to express my amazement to hear men object to all change in the customary spelling. To be sure, they are but few, and those who have never given the matter an hour's thought or study, who thus blindly cling to the fetich of custom, stolidly resisting any change whatsoever. The changes that have been made, and that have become the rule—these they willingly accept. They have grown used to spelling *music* and *public* without a final *k*, and are willing to leave off this useless second tail. (The English even now stick to the final *k* in almanac.) But their mental forefathers as stoutly resisted the curtailing process, and their similarly minded children will finally accept the changes that progressive minds are now forcing on their fathers. The stupidest, most disgusting thing in the world, is the brute conservatism that refuses all change, good or not good, from stolid, unreasoning desire for things as they are. Better chorea, ay, better epilepsy than absolute paralysis. Conservatism is the sham coyness of linguistic old-maidism, the crinolin fig-leaf of philologic prudery, a fig-leaf, too, not the result of too much, but of too little knowledge—indeed, of an abysmal ignorance of the history of the language.

And most strange of all is such a dead-blank wall of prejudice on the part of medical men. Their science is a progressive one; their life is harassed and hurried with the crush of duties and opportunities. Every hour's experience teaches them to ignore precedent and to cut by the shortest route to the desired end. No body of men is more hampered, and in no calling is labor so much thwarted as in theirs, by popular inherited prejudices, and the old unsloughed snake-skins of quackery, of myth and of mummery.

The vast majority of medical words have not grown out of the old languages, either of the ancient living Greek or of the medievally preserved dead Greek. When a word is desired the modern minter snaps out his Liddell and Scott, gets some words that best suit his purpose, and shakes them together in his etymologic basket until they cohere into some sort of unity, not infrequently a very ludicrous one.

The argument most relied on by the obstructionists is the etymologic one. But even this poor scarecrow can not be set up in our medical cornfields. I do not think the etymologic argument of much force, even in the general literary language, because aready the form in a large portion of our words is altogether misleading, changed, or lost, and because the vast majority of people will and can never know anything of the etymologic rootings of their language. But far more important still is the fact that with printing came the impossibility of a coinage ever being lost, its history unrecorded, or its tiniest rootlet unpreserved.

But far and away over all is the fact that the needs and the help of the living millions of bodies and minds present and to come outweigh linguistic and philologic considerations. Language was made for man, not man for language.

Moreover, and this note well despite all the literary coxcombs and philologic old maids of Christendom, reform is inevitable. The people, with unerring instinct, are determined to mold their language into some better conformity to their needs. Slang is riotously rampant, and slang is language in the making. Some reform in spelling is as certain to come as future men and women are certain to come, and wisdom on our part is to accept the inevitable, and to make that inevitable as sensible as we can. As another has said: "The grammarian, the purist, the pernicketty stickler for trifles is the deadly foe of good English, rich in idioms and racy of the soil."

* Professor March says that "it has been computed that we throw away $15,000,000 a year paying teachers for addling the brains of our children with bad spelling, and at least $100,000,000 more paying printers and publishers for sprinkling our books and papers with silent letters."

Information Wanted.—Why is it ethical to prescribe German patented medicines and boycott the standard products of American chemists?—*Medical Brief*, December, 1895.

CHAIRMAN'S ADDRESS.

Address of the Chairman of the Section on the Practice of Medicine, delivered at the Forty-seventh Annual Meeting of the American Medical Association, held at Atlanta, Ga., May 5–8, 1896.

BY WM. E. QUINE, M.D.

PROFESSOR OF THE PRACTICE OF MEDICINE IN THE COLLEGE OF PHYSICIANS AND SURGEONS OF CHICAGO AND PRESIDENT OF THE FACULTY.

THE REMEDIAL APPLICATION OF BONE MARROW.

For the original mention of bone marrow as a possible remedy we are indebted to Brown-Séquard and d'Arsonval who, in 1891, suggested its use in the treatment of leukemia and other diseases believed to be characterized by defective hemogenesis. A year and a half later Fillean reported its successful employment in the form of an extract, in the treatment of the anemia of debility and of tuberculosis; and Macalister recorded a favorable result of its use in one case of lymphadenoma. (*British Med. Jour.*, June, 1893.)

It was left for T. R. Fraser, of Edinburgh, however, to press the new remedy forcibly upon the attention of the medical world and this he did in a report of its curative effect in a case of progressive pernicious anemia. (*British Med. Jour.*, April 7, 1894.) The clinical phenomena described were those of extreme anemia and the diagnosis was based on repeated blood examinations. The treatment included the use of arsenic, iron and salol, part of the time, but no improvement was noted till marrow was given and the improvement advanced steadily under the use of the marrow after the other agents were withdrawn. The animal product, whether of the yellow or the red variety, is not stated, was given to the extent of three ounces daily. The report ends with the declaration that "The patient is now in a practically normal condition."

Dr. I. N. Danforth, of Chicago, well known as a physician of extensive experience, and as one of the most accomplished microscopists in his city, reported a case of pernicious anemia which, under treatment with arsenic, glycerite of red marrow and various adjuvants, improved so rapidly as to enable him to say at the end of three or four months that the patient "now shows every indication of gradual restoration to health." (*Chicago Clinical Review*, 1894, v.) Unfortunately the evidences of sustained improvement in this case were short lived. Not long after the publication of the report progressive deterioration of health ensued, accompanied by the presence of malarial organisms in the blood, which were now discovered for the first time, and the deterioration advanced to a fatal termination. In view of this unhappy conclusion of an inspiring beginning it would be interesting to know whether the words of assurance used by Fraser two years ago in relation to the status of the case reported by him are equally applicable at the present time. In a personal communication dated April 4, 1895, Professor Danforth informs the writer of his later observations. He considers marrow applicable to all cases of anemia and has used it with temporary advantage in pulmonary phthisis and in Bright's disease; and with apparently marked and permanent benefit in the anemia of rapid growth, overwork and underfeeding. In one case of Hodgkin's disease, in which the remedy was used, the patient got well; and in two cases of splenic leukemia there ensued an increase in the number of red corpuscles and some abatement of the hemorrhagic tendency, without any impression appearing to be made on other phases, or on the rapidity of progress of the malady. Professor Danforth prefers the red marrow and prescribes it in the form of an aromatic glycerite, of which one dram is given after meals. He directs attention to the possible danger of tubercular and other infections from the administration of uncooked marrow, and recommends the exclusive use of calves' marrow with a view to minimizing this danger.

J. D. Mann reports (London *Lancet*, 1894, I) four cases of anemia, two of them, apparently, cases of chloranemia in girls, and the other two, cases of simple anemia from hemorrhage, all of which were greatly benefited by the remedy; and Chas. Forbes (*British Med. Jour.*, 1894, II) and Henry Hun (*New York Med. Jour.*, 1894, LXI) each records a single observation of like kind.

That the utility of the agent is not limited to simple and easily curable cases of anemia is strongly vouched for by W. G. Bigger (London *Lancet*, 1894, II) who claims to have cured by its influence a case of leucocythemia of six years' standing. Iron and arsenic had been used with benefit on former occasions, but now a time had arrived when these remedies were powerless to prevent active and threatening progress of the disorder. At this time bone marrow was used, and in a remarkably short time it made the patient, a boy, perfectly well. The spleen, previously much enlarged, returned to its normal size. It is to be regretted that the gratifying experience of Dr. Bigger can not, apparently be duplicated by other physicians. That splenic leukemia is not strikingly influenced by bone marrow, as an ordinary event of its use, is clearly shown by the failures of Danforth, already mentioned, and of other observers hereinafter quoted.

One of the most satisfying contributions to our knowledge of the exact powers of the remedy, in various kinds of anemia, is furnished by J. S. Billings, Jr. (*Johns Hopkins Hospital Bulletin*, 1894, v.) This gentleman cites additional proof of its efficacy in chlorosis and chloranemia; and shows that in two cases of pernicious anemia, described with classical minuteness, it proved utterly useless; whereas, arsenic, in these cases, given in increasing doses, proved highly serviceable.

A. McL. Hamilton also records an interesting series of observations. (*New York Med. Jour.*, 1895, LXI.) He tested both yellow and red marrow, but obtained better results from the red. In every case cited the red corpuscles were counted by the Thoma–Zeiss apparatus and their hemoglobin value was estimated by the instruments of Fleischl, Gowers and Henocque. The whites were not counted. Professor Hamilton shows that the multiplication of reds after profuse hemorrhage, is approximately twice as rapid as the maximum rate hitherto recorded (20,000–30,000 daily per cu. mm. of blood), and that the total number of reds can be made to exceed the showing of normal blood (5,000,000 per cu. mm.) by fully 20 per cent. (6,000,000 per cu. mm.) He reports a case of pernicious anemia in which iron, arsenic and cod liver oil had been used without success, and bone marrow had subsequently caused a rapid increase in the number of reds, from 1,000,000 to 6,000,000 per cu. mm. of blood, together with an equally striking improvement in all the symptoms of the disease. The improvement was found to maintained at the end of two months, but the subsequent history of the case is not recorded. The report includes the results of eighteen

separate studies, most of them relating to cases of ordinary anemia without special features, and demonstrating the value of the remedy.

My own observations concerning the effects of marrow in cases of chlorosis and simple anemia agree in every detail with those already recorded. In one case of splenic leukemia (*Chicago Clinical Review*, January, 1895) the remedy used alone had the effect of increasing the number of red corpuscles and lessening the hemorrhagic tendency without appearing to improve the condition of the patient in other respects or retarding the progress of his sickness to a fatal termination. In this case, also, malarial organisms, so pronounced by two thoroughly trained microscopists, were found in the patient's blood in the last weeks of his life. They had been previously diligently searched for on several occasions without success.

Bone marrow, then, and especially red marrow, is certainly a readily assimilable organic compound of iron and is a valuable addition to the resources of the physician in cases of ordinary chlorosis and anemia, and in some cases of blood impoverishment of a more intractable kind. Whether it is anything more than an assimilable preparation of iron is not conclusively proved. The claims made for it in relation to the the cure of pernicious anemia, leukemia and kindred disorders seem to be premature; for sufficient time had not elapsed in any case to warrant such a conclusion. Moreover, in some of these cases, as pointed out by Billings (l. c.), the correctness of the diagnosis is not above suspicion; and, in others, arsenic and iron were given in conjunction, or in alternation with the marrow. We have no knowledge that enables us to understand how it is possible for this substance to effect a cure of pernicious anemia or of leukemia. It can not act like an ordinary animal extract which supplies a deficiency. Its operation must be unlike that of thyroidal extract in myxedema and adrenal extract in Addison's disease. In these disorders there is atrophy or some degree of destruction of the thyroid and adrenals, respectively, and, consequently, insufficient secretion from them to supply the needs of the body; and the administration of an artificial extract of the thyroid or adrenal supplies the demand directly. Whereas, in pernicious anemia and leukemia the bone marrow seems to be hypertrophied and over active, but notwithstanding its activity it is unable to keep pace with the globular destruction that is going on at the same time. Finally, there is no proof that marrow is a secretion. Its function seems to be that of cell production and development. Nor is there any proof that this function is influenced in any way by any constituent or secretion of the marrow itself (Billings). Many accurate observations are needed to make a basis for conclusions that will endure.

ADDISON'S DISEASE AND ADRENAL EXTRACT.

Fourteen cases of Addison's disease are now on record as having been treated with the adrenals of lower animals, mostly those of the sheep. The glycerite of the uncooked, minced organ seems to be the favorite preparation. It is given in quantities representing from 15 grains to 3 drams of the fresh adrenals daily, and these quantities are subdivided into three or more doses. Conclusive proof has not yet been adduced that the preparation posseses curative powers. In about half the recorded cases improvement was noted, and in some of them the improvement was very striking; but information is lacking as to the stability of it.

Fluctuations in the activity of Addison's disease are common, including long periods of arrest of progress, during which more or less recuperation of the digestive and circulatory powers takes place, together with general improvement in the condition of the patient. In a given case it may not be easy to decide whether the arrest and recuperation which are manifest have come spontaneously, or have been produced by force of therapeutic agency.

Quite as good reasons are found in literature for a suspicion that adrenal extract does harm in some cases of Addison's disease, as there are for regarding it as beneficial in others. The whole theory, or fact, of internal secretion in its relations to therapeutics is still of uncertain stability. One can understand how the body, deprived of needed materials normally given to it by process of internal secretion by the suprarenal glands, the thyroid, the kidneys and other organs, may be greatly benefited, when these organs are incapacitated, by the administration of extracts derived from properly selected normal organs of lower animals; but it is difficult to understand how it is possible for such a substitute to eradicate the disease which made its administration necessary. If a patient's adrenals have been destroyed, or permanently crippled, how is it possible for the adrenals of the sheep, given to him a few days or weeks, to make him so very sound and well that ever after he will be able to maintain good health without the assistance of his own?

The only case of Addison's disease that I have treated by this process of substitution was that of a lady of 32, of tuberculous antecedents, who had been ill for four years, sometimes better, sometimes worse. Part of the time there was erratic subfebrile elevation of temperature, but during a much greater part the temperature was normal or a little below. The usual symptoms of the disease were plainly marked—anorexia, nausea, weak digestive powers, constipation, pallor, debility, and enfeeblement of circulation. At times the circulation was alarmingly weak. Bronzing of the skin in various places, face, neck and back of the hands, and a like discoloration of the buccal mucous membrane completed a fairly representative picture. There was no emaciation.

Fluctuations in the activity of the disease were marked and in the early part of its history the lady was able to attend to her ordinary duties a considerable portion of the time without excessive fatigue; but notwithstanding the occurrence of periods of arrest and restoration, relapses of active progress gradually exhausted strength and compelled her to keep to her bed or couch. Under these circumstances bone marrow extract was prescribed, in addition to the arsenic and iron already in use. The patient slowly improved, as she had done several times before without the assistance of marrow extract, under like circumstances of prostration, and hoping to expedite the improvement still more I prescribed a glycerite of sheep's adrenals, beginning with a dose of fifteen minims three times daily, and gradually increasing till dram doses were reached. The larger doses occasioned nausea and were continued only two or three days; thereafter the dose of half a dram was not exceeded. On the third day of this treatment the lady informed me that the new medicine was not

agreeing with her. She patiently continued taking it, however, usually in the dose of half a dram after meals. On the ninth day I noted a temperature of 100.5 (mouth) and on the occasion of my next visit, the twelfth day of the substitutive treatment, the temperature was 102 degrees. Nausea and extreme faintness were now complained of and inability to take the usual amount of food. The lady insisted that the new medicine was killing her, and fully satisfied that the end was near, and that sheep's adrenals could not postpone it, I ceased giving the preparation. Death came quietly, without awaking her nurse, four days later. This fragmentary account teaches nothing except that the *post hoc, propter hoc* philosophy is susceptible of more than one application in relation to the use of animal extracts.

TYPHOID FEVER; ITS TREATMENT BY INTESTINAL ANTISEPSIS AND ELIMINATION.

Among recent contributions to the literature of special therapeutics, few are more striking or suggestive than those of J. Eliot Woodbridge, of Youngstown, Ohio, and W. B. Thistle,[1] of London, England, in relation to the treatment of typhoid fever by sustained processes of intestinal antisepsis and purgation.

These gentlemen appear to have been working independently of one another on the same lines and with substantially the same results, but with different implements.

Their audacious declaration that the disease in question can be aborted every time, if treatment be begun early, and that death from it is never necessary, is likely to impress the average physician as being so extravagant and unwarranted by their own showing as to discourage him from undertaking an attentive examination of the facts upon which the claim is based.

To dismiss the subject with the statement that "the chief merit of the 'Woodbridge treatment' is its harmlessness," as has been done by one of our most distinguished clinicians, who had never given the treatment a trial, seems to me tantamount to prohibiting one from attempting to improve upon present methods of practice. If those who are inclined to condemn the proposed measures without a hearing will turn to any standard treatise on typhoid fever and study the elements of treatment, largely nihilistic, and when not nihilistic, symptomatic, recommended by the author, they will be forced to admit that much improvement is both desirable and possible. The medical profession of this country has been imposed upon so often by shallow and pretentious writers in relation to the phenomenal success they claim to have achieved by inconsequential agencies that now none but persons of recognized eminence are likely to receive prompt and respectful attention. The most successful treatment of typhoid fever in vogue to-day in the great hospitals of the world is undoubtedly the hydriatic, antipyretic method of Brandt; and it is interesting to know that an incidental effect of this treatment is increased renal elimination to the extent of intensifying the toxicity of the urine five fold.[2] It is also interesting to remember that the free administration of water by the stomach usually has the effect of quieting delirium, depressing temperature and making notable improvement in the general condition of the patient. If elimination of the products of bacterial activity is to be recognized as an important object and effect of treatment what is to be said against the proposition to destroy or restrain the activity of the bacteria themselves and thus prevent the elaboration and absorption of their toxic products? It is this that Woodbridge and Thistle claim to do and urge their professional brethren to do.

It is unfortunate that the basis of therapeutic effort maintained by the gentlemen referred to, is so much obscured by the prominence of fantastic details; for, if attention were limited to the underlying principles the reason of the reader would be less grievously offended.

In justice to our colleague from Ohio it must be kept in mind, however, that he has vigorously and repeatedly disclaimed any intention to foist upon his professional brethern *sine qua non* specific compounds to be given unfailingly in one, two, three, order, for the infallible cure of typhoid fever. His prescriptions are merely intended to serve as a guide to the application of principles. Thistle does not use the same medicines at all and yet his results, so far as they go, are no less satisfactory.

The especial merit of the plan of treatment under consideration, if it have any, does not reside in any new conception that is embodied in it, for there is none. It resides in the promptitude and vigor with which long-recognized but heretofore feebly administered therapeutic axioms are put into play. It will not be claimed, I think, that there is any specific merit in podophyllin or that it is strictly necessary to require a patient to swallow a particular tablet every fifteen minutes for thirty-six hours before permitting him to take a dose of epsom salts. The vital requirement is to disinfect the bowel as quickly as possible and at the same time to establish and maintain free drainage or elimination. It is a fact of easy demonstration that if this be done early, meteorism will not occur and the discharges will be without unpleasant odor. More, it can be easily demonstrated that meteorism already present, is dispelled by this treatment and that the fetor of discharges is gradually corrected. Putrefactive processes in the bowel contribute something to the natural history of typhoid fever. Every case of the disease is an example of mixed toxemia and the chief primary seat of infection is the intestinal mucous membrane.

The attitude of incredulty and indifference that is generally maintained in relation to the claims of Woodbridge and Thistle seems to be justified by the well-established fact that the bacilli of typhoid and the toxins they produce are not limited to the lumen of the bowel but have penetrated into the walls of the tube and, to some extent, found their way to remote parts of the body before the physician is ever called upon to give a dose of medicine; and it may well be doubted that any process of local treatment of the alimentary canal can make an important impression on the life history of the microörganisms which are now distant from it. It must be remembered, however, that before the bacilli can invade the tissues they must be present in the lumen of the bowel. It must be remembered that they multiply here. It must be remembered that the process of invasion of tissue and transmission to remote parts is not completed in a day but is a continuous and progressive one, lasting many days. It must be remembered that the effect of these organisms on the invaded tissues of the bowel—

[1] Canadian Practitioner, April, 1893; Medical Record, March, 1894, and Sept. 14, 1895.

[2] A. H. Burr, Chicago Medical Record, October, 1894.

inflammatory swelling, necrosis, etc.—depends on the number present at one time, the duration of their stay and the degree of concentration of their toxins. (Thistle, Sims Woodhead.) It must be remembered that the severity of an infectious disease, and the liability to intercurrent infections, depends, other things being equal, on the degree of the concentration of the toxic principles in the blood. If these facts are kept in mind it will appear rationally possible that by processes of purgation and antisepsis we may be able to prevent, in some degree at least, a concentrated infection of the lymphatic structures of the bowel and the consequent destruction of them, together with concentrated systemic infection and its attendant dangers. It is also rationally conceivable that the duration of the disease may be shortened.

The bacilli that have already reached remote parts of the body doubtless play an important role in the evolution of the natural history of typhoid fever; but it is plain that if the number be kept within bounds by restraining the activity of recruiting from the bowel, the minimum amount of damage will be done and the best possible opportunity will be left to invaded parts to destroy and triumph over the limited number of bacilli which have reached them.

If the foregoing course of reasoning is correct it points to the conclusion that the earlier antiseptic and eliminative treatment is instituted and the more thoroughly it is maintained, the more effective it will be. To withhold its employment a week or two, and permit the intestinal structures to become saturated with microbes and toxins and the system at large to become overwhelmed by concentrated infections would not be giving either the treatment or the patient a fair show. Processes of prevention are not to be expected to cure damage that has already been done.

It is not desirable that the antiseptics be absorbed. It is sufficient if a continuous stream of them be kept passing through the alimentary canal. To give them and allow the bowels to remain constipated is to invite the absorption of toxins that have already been elaborated. By making the culture medium noxious to the germs, by the use of antiseptics or germicides, and at the same time by diluting this medium more and more by the action of purgative medicines all will be done that can be done by these therapeutic measures. Continuous purgation is, I conceive, of at least equal importance with the continuous use of intestinal antisepsis.

One fact appears to have been fairly demonstrated by Woodbridge and his followers, viz.: That purgation begun early in the clinical history of the disease and continued steadily throughout its course does not increase liability to perforation or hemorrhage. It seems to lessen it. This can hardly be considered as soundly established, for the examples of typhoid fever that have appeared during the last two or three years have been, for the most part, uncommonly mild; but if it were soundly established it would not warrant the conclusion that active purgatives previously withheld can be administered without danger when grave intestinal lesions exist.

Permit me to direct attention to the rapidly growing statistics upon which the claims of Woodbridge are based. To say nothing of the hundreds of cases reported by himself in which little or no bronchitis occurred, little or no delirium, little or no subsultus, little or no meteorism, little or no dryness of the tongue, but little circulatory and thermic disturbance and no perforation—cases that pursued a singularly brief and benign course; that were free from complications of every kind and invariably terminated in recovery when treatment had been begun early; let us consider the testimony presented by other writers:

Thistle (loc. cit.) has reported one hundred and seventy-two cases representing all grades of severity and progress when treatment was begun, with a mortality rate of 3 per cent.

F. Grover (Jour. A. M. A., Feb. 15, 1895) reports fifteen consecutive recoveries; E. J. McCollum (Ibid. Feb. 1, 1896) reports eighteen and J. J. Orton, eight; Wesley Davis (Ibid. March 4, 1896) reports eighteen; W. B. Shields (Ibid. April 11, 1896) reports twenty-eight recoveries and one death; and the present writer now reports twenty-one consecutive recoveries covering his private practice of the last two years. Total 275 cases and 6 deaths—a mortality rate of 2.2 per cent.

Considering that these cases came under treatment at various stages of progress of the disease it would appear probable that there is something of merit in the plan; and yet we are not to forget that during the past two or three years it has been uncommon for typhoid fever to terminate fatally under any kind of management and that exalted enthusiasm in relation to a particular specific method is far from having a safe foundation.

Hemorrhage occurred in two of Shield's cases and in one of them, it caused death.

In Davis's series four examples of hemorrhage and two of relapse are noted.

The cases referred to by the present writer included various degrees of severity and advancement when treatment was begun.

It is not claimed that the "Woodbridge treatment" was employed in one of them. Neither the trivial differences between prescription "No. 1" and prescription "No 2," nor indeed, the prescriptions themselves, have impressed the writer as being of vital importance to any of his patients. The plan of treatment followed consisted, in a general way, of purgation—to the extent of from three to six evacuations daily, begun at once and continued throughout the course of the affection—together with intestinal antisepsis. The purgatives employed were of various kinds but usually either mercurial or saline. The antiseptic used was generally the mixture of guaiacol carbonate gr. iij, thymol gr. i, menthol gr. ss, and eucalyptol m. i, referred to by Woodbridge as "Prescription No. 3;" and it was given in the form of a capsule every two or three hours.

Other measures of treatment were not ignored. Rest in bed was enjoined in all cases, and the diet was of the kind in vogue with the profession. Sponging was used in all cases with more or less frequency and in one, that of a medical student, the Brandt treatment was employed systematically for a period of ten to twelve days. In short no attempt was made beyond that of studying the effect of continuous purgation and antisepsis in typhoid fever—and that without neglecting the use of better established methods and measures.

Although no death occurred the results, especially in the direction of aborting the malady, albeit not discouraging to one who had not expected much, were much less brilliant than those recorded by our friend from Ohio.

Limiting attention to thirteen cases in which treat-

ment was begun during the first week, even upon the uncertain basis for diagnosis that was generally found at the time. I respectfully report that two of these cases proved to be of the abortive variety—one reaching normal temperature on the ninth day and the other on the fourteenth.

In one case, that of a physician, a single relapse occurred; total duration thirty-eight days.

In another, that of a student, a second relapse occurred, total duration sixty-four days. The first relapse was engrafted on the primary attack and was indicated by the occurrence of epistaxis, abrupt rise in temperature and pulse rate and the appearance five days later of a rather coarse, but sparse, roseolous rash. A similar train of phenomena appeared during the seventh week. The primary course of fever was of moderate severity but the first relapse was uncommonly violent. Pneumococci were abundant in the sputa but no pulmonary consolidation was discovered. During the second relapse several small abscesses appeared, subcutaneous and submucous (buccal).

The remaining nine cases were singularly mild and free from bronchitis, meteorism, offensive discharges, dryness of the mouth, apathy, delirium, subsultus, hemorrhage and other disturbing manifestations. The usual pulse rate was between eighty-four and one hundred, and in no case did it go beyond one hundred and four. After the third day of treatment in no case did the temperature go above 102.5 degrees. The average duration of the nine cases was seventeen days.

It is not assumed that this inconsequential showing proves anything. It is merely in line with the ordinary observation of medical men in respect to the mildness and benignancy of typhoid fever during the past two or three years. Nevertheless there is enough merit in the conception of intestinal antisepsis and drainage, as a means of obviating continuous intoxication, to warrant one in giving it free and fair play. No one has a right to condemn it without proof.

ORIGINAL ARTICLES.

CAN WE IMPROVE UPON THE SANITARY CONDITION OF OUR CARS?

Read at the Second Annual Meeting of the American Academy of Railway Surgeons, held at Chicago, Ill., Sept. 25-27, 1895.

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I take it that every physician is a sanitarian; if not, he should be. The doctor's true sphere of action is not confined to disease alone, but embraces man's whole life when in a state of health as well as when in a state of disease.

A knowledge of the laws of hygiene is essentially necessary to the education of every physician, and its worth as a true science is of no less importance to the general public. We find in searching the archives of the past that those who preceded us in our noble calling recognized the science of sanitation as a true sister to the art of medicine as well as her greatest, brightest ally. Every civilized government has assumed the inherent right to protect the health and provide for the safety and welfare of its people; and this is not merely a presumed right, but it is a duty and obligation which the soverign power owes to the public. That this is true and that sanitation has been from the remotest period of history an integral part of medicine and accorded a place of distinction in the councils of ancient governments can not be denied. Let us for a moment, as a prelude to this paper, look into the realms of now almost forgotten history with reference to the laws governing public health.

This department of science (sanitation) has received so strong an impulse during the past few decades that many persons regard it as of modern origin; but on turning back to the records of early history we almost invariably find evidence that the health of the general population was a subject of legislation.

The Mosaic code of laws, the most ancient on record, contained minute directions for cleanliness of the person, the purification of the dwellings and the camp, the selection of healthy and the avoidance of unhealthy food, the seclusion of persons with contagious disorders and various other points bearing on the physical well-being of the Jewish nation.

The Greeks and Romans—although not like the Jews, making hygiene a part of their religion—were far from neglecting it. The laws of Lycurgus, says Dr. Gairdner, "are not wanting in very pointed enactments on sanitary matters; and the importance attached by the Greek Republic, and in the Platonic polity, to physical culture is too well known to require remark."

"The Roman people, poor and apparently rude as it was in its origin, yet found time, amidst its military operations, to construct the *cloaca maxima*, an indestructible and stupendous memorial of its attention to the drainage and sewerage of the city at a very early period of its history. At a later period aqueducts were made to cover miles upon miles of the surrounding plain; and their splendid ruins, still partly used for their original purpose, attest the munificence and the abundance with which the first of sanitary requisites was supplied to the imperial city." When state physicians were first appointed in the Roman Empire is not certainly known. Their mode of election is described in the Theodosian and Justinian codes. There were ten of them in the largest towns and to each district or subdivision, seven in towns of the second order and five in smaller ones. They collectively formed a college whose duty it was to attend to public health, and they may be regarded as the earliest type of our general medical council.

We find on our own continent that the ancient and energetic Aztecs were not ignorant of the laws of sanitation; and long before the sailing of Columbus from Palos, we find that their water supply and efforts at drainage evidence their knowledge and appreciation of hygiene equal to if not superior to that in vogue in some of our municipal governments of to-day.

Gradually, however, as Christianity spread, an utter misconception of doctrine led to the neglect of all care of the human body, and the question of public health, the foundation of a nation's wealth, growth and happiness, was ignobly buried in the darkness of the middle ages. It has now been unearthed by the inexorable demands of modern enlightenment, and gaining ascendency, has greatened and glorified medicine without marring the luster of her scientific consort, and to-day she turns to the people and their rulers, outside the medical fold, and demands as her right a place of honor in their councils. Thus we see

that from time immemorial it has been as much the physician's duty to regard the laws of sanitation as to treat the ills arising and sure to follow a violation of her mandates.

When we find that the air of passenger cars is shown upon careful examination to be equal in impurities, greater in amount of carbonic acid than some of the sewers of our cities, and the sleeping car to be pronounced a "hot bed of infection," it is time for us as railway surgeons on behalf of our respective railway companies and our duty to the traveling multitudes to investigate and see whether or not we "can improve the sanitary condition of our cars."

Permit to quote from a recent edition of the "National Board of Health Magazine."

"Everybody knows that the aim of the car-builder of the present day is to make the sleeper a palace on wheels. The seats are upholstered with the softest material, combined with reasonable durability; the carpets are most velvety; the curtains soft and rich; the mattresses, pillows, blankets and coverlets of the best. The whole furnishing of the car is similar to a private drawing-room."

Who could ask for more in the sense of comfort? And what is here said of the sleeping car, can be with equal propriety and justice claimed for the passenger car. We know that the passenger car of to-day is the evolution and product of many years of careful study, and it would appear that in meeting the demands of the traveling public it has nearly reached the limit of perfection in dimension and compactness as a component part of the train. In many instances from the artisan's point of view it is constructed both as elaborately and comfortably as the handiwork of the mechanic can devise. In the life and competition for trade, the rapidity and comfort in transit has stimulated our various railway companies to build and improve the passenger car so rapidly that we look with admiration at the results achieved in all that is artistic and beautiful in veritable palaces on wheels, speeding over mighty domain as true evidences of the skill and enterprise of our progressive people. With all this, however, we must admit that the sanitary condition and arrangement of the passenger car is bad, and this condition is often made worse through neglect or ignorance in the use of those means at hand provided for its ventilation and cleanliness. There is no doubt that had the mechanic gone hand in hand with the sanitarian in the construction of the passenger car, greater results would have been achieved. Certainly, so far as lighting, heating and ventilation is concerned, measures have been so far neglected as to call for legislative enactments in many instances, and a world of literature looking to the correction and improvement of the existing evil.

We quote further from this article by Dr. Pattison, on "Car Sanitation." After describing the various physical conditions of those who travel in the sleeper, and noting the infectious nature of tuberculosis he says: "And the tuberculous patients travel more than any other classes in search of suitable climate. Persons suffering from phthisis pulmonalis are to be met with in the sleepers upon nearly every transcontinental train. They cough and expectorate as all such do, sometimes in the cuspidor, sometimes in the handkerchief, but very frequently on the carpet as this is not their own. When on the last, the germ-laden expectoration becomes rapidly dried and ground with dust, rises in the air of the car and is inhaled by the susceptible fellow passenger, often an innocent stranger. It is quite rational to presume that in this way the fatal disease is often spread."

The doctor then goes on to say: "What, after a time is the sanitary condition of the sleeper? It becomes simply a hot bed of infection. It can not be otherwise, for no efficient measures are taken to prevent it. The sheets and pillow cases are changed daily, sent to the laundry. Allow that they are thus purified; what is done with the mattresses, pillows, blankets, coverlets, and curtains? They are closed up from sunlight and air in the upper berth, and for months at a time they are never exposed to nature's purifiers."

"So far as the car itself is concerned, at the end of the trip, the carpet is swept, the cushions brushed in a dry condition; a profusion of germ-laden dust rises to settle again; what falls upon the wood work, and is visible, is brushed off with a duster to settle again on the carpets and cushions, where all remains in the most favorable condition to be raised into the air by the next set of passengers and the motion of the car upon the return trip. To my mind, the sleeper of to-day is an extremely active factor in the propagation of infectious diseases, more so on account of its luxurious furnishings than other cars."

It can not be said that these remarks are overdrawn or exaggerated, neither will anyone doubt the infectiousness and contagiousness of tuberculosis nor the vast numbers who are constantly traveling afflicted with this disease in search of genial climes to invigorate their exhausted frames. What an infectious field the car from such contamination becomes in spreading disease among the innocent and unprotected public. And tuberculosis is not alone in the consideration of this unwholesome state of affairs, for the germs of many other infectious diseases are lodged and housed up through this want of better hygienic measures to wreak vengeance upon the unsuspecting.

Many suggestions have been made with reference to abating this evil, including many alterations in the construction of the car, the abolishing of the draperies and tacked-down carpets and other furnishings that will not withstand the proper methods that should be used in a thorough fumigation and disinfection.

Restrictions are likewise suggested to be imposed upon invalids requiring them to have certificates from the proper authorities showing freedom from infection as is necessary in the transportation of the dead. Many of the suggestions are practicable and could be easily put into operation, and carried out with little expense.

It is questionable, however, if under our form of government, State or federal, invalids could be obliged to present a certificate showing freedom from infection before being permitted to obtain transportation as it is required in transporting the dead.

It is certainly true, that it is as dangerous and hazardous to the public to carry by rail the infectious living as it is to carry the infectious dead, and probably more so, since the carrying of the dead will never equal in number the invalid class nor are the conditions of possible contact the same; to have in the same car persons afflicted with infectious diseases disseminating and spreading germs under the most favorable conditions is much more dangerous to the public than are the infected dead in the baggage car.

Still, the law of equity would grant privileges to the one that the relatives of the other could scarcely exact

as an inherent right. We can not prevent the infected from traveling no matter how plainly we may demonstrate the death dealing germs left in their wake. We must exert sanitary measures and precautions and depend on these to protect the public from disease.

If we wish to improve the sanitary condition of our cars we must not only look into the questions of ventilation, heating and lighting, but we must go beyond this and show to the car builder the wisdom of consulting and associating with the mechanic the ideas of the sanitarian. It is difficult and, in many instances, quite expensive to improve upon a poorly constructed car from a sanitary standpoint, and to attempt such improvement would necessitate an outlay greater than many of the companies would be able to bear. To accomplish the most good by having a properly ventilated car, and one that is susceptible of the greatest cleanlines, we must direct our attention to the building of the same. It is said that the most intelligent men of our country are engaged in the management of railways, and the fact that so little has been done in the way of railway sanitation is simply because these gentlemen are unaware of the value of such a departure, and have not been made to see the monetary gain that would accrue to their several companies by the proper enforcement of sanitary laws. This is undoubtedly true; so, also, is it true, that in a great organization of railway surgeons as we have here, the importance of sanitary measures with reference to the hygienic condition of the coaches should be studied, and the knowledge thus derived should be given to our respective railway companies for their information and guidance. I do not think that we should so long ignore these matters of vital importance as to let the legislative branches of our government step in by their enactments and describe, for instance, the manner in which heat should be applied to the train, any more than we should wait and expect from this same source information and instruction regarding the treatment of fractures and other injuries resulting from wrecks. I trust that it will be the sense of this association to deem it a duty incumbent upon it and always to look into the sanitary condition of our cars with a hope of improving it.

I do not intend to attempt in this paper to suggest to you what would be the most improved ideas of car sanitation. This must be reserved for the more efficient sanitary engineer, whose scope and field of observation is far greater than mine.

To this same expert must be left the plan of ventilation, complex and difficult of solution as it is, the maintenance of proper temperature and the best system of water-closets. All of these are susceptible of vast improvement.

The question of cleanliness, however, in the car proper, the water coolers, the purity of the ice and water supplies are matters that we are capable of coping with. If it is carried out by some regulated system of rules enforced by all the railway companies alike, a more wholesome and healthful condition will result to the public and we will be credited with the honor of having improved the sanitary condition of our cars.

All coaches, day or sleeping, especially after long trips, should be subjected to a cleansing and disinfection. This can be done in several ways and should be provided for in the necessary instructions given the employés having this matter in charge. The same rigid rule should apply also the bed, bedding, carpets and draperies of the sleeping car. Not only should the car be cleaned at the end of each trip, but as far as possible it should be kept so while in transit. Since many people of filthy habit travel, the necessity of this will become obvious. The water coolers, which are scarcely if ever washed, should receive closer attention; likewise the ice and water with which they are filled, and the often disgusting manner in which this is done. The cuspidors should be cleaned as often as necessary, and when used by the tuberculous, should be disinfected; and until a better system of closets are devised, dry earth or a freer and more elaborate system of flushing should be provided.

Whatever system is adopted looking to a better sanitary condition of the cars should be one that is enforced by all the roads alike.

In concluding this paper, I thank you for your kind consideration and hope that I have been successful in showing why we as railway surgeons should be sanitarians, and why some of our deliberations should be in the direction of the improvement of the sanitary condition of our cars.

DISCUSSION.

DR. REED, of Columbus, Ohio.—I believe I have been generally known as a sanitary crank, and I presume that for an individual who has as little money as I have to spend in this matter, I have spent perhaps as much as any man in the country in investigating the matters about which the author of the paper has written. I made a sanitary inspection of the Big Four, the Panhandle, Pittsburg, Fort Wayne and Chicago and the Baltimore and Ohio Railroads some years ago. This inspection consisted in the investigation of the air by chemic analysis, the investigation of the cars, the plan of heating, the water-closets and the ventilation; the temperature of the car at the floor, at the level of the mouth and at the ceiling, and it required no small amount of time, work and expense. After examining this matter carefully I found a great many things to recommend in my report. I had the pleasure of sending a copy of this report to President Pullman, and received a reply from him stating that he believed my suggestions were good. The trouble usually arises with the superintendents and the managers, who are, so to speak, between the devil and the deep sea. They are anxious to make the cars as comfortable and as handsome as possible to accommodate the traveling public, and on the other hand they must curtail expenses in order to maintain their positions as servants of the stockholders. To add these improvements means expense, and so long as the traveling public does not make any special claim for improvements on the cars, they do not feel inclined to make them. I do not think there is a general manager who would not admit that the paper read by our friend here was right and every word perhaps in it true, but they look at it from a business standpoint only. Quite a number of general managers have expressed their opinion to me on the subject and have said there was no question about its importance, but that so long as they were not required to make these improvements in order to get passenger traffic over their roads they did not deem it necessary to take the lead in the matter. I have no doubt Mr. Pullman looks at it in the same light. He sees very plainly that an elegantly fitted car, when placed beside another on the track that is not so elegantly fitted up, at the same price and going to the same place and making the same time, will be preferred by the public. I believe that until the public is educated in the matter you can not get the railway companies to adopt a new plan until the riding public demand it, and say to the railroad managers, "We won't ride on your road unless you give us a sanitary car to

ride in." I think the time will come when we will have these improvements, because I am sure the companies will be ready to make the expenditures if they see a return for this extra expense, but they do not feel like making the expenditures otherwise. Railroad companies are not organized for philanthropic purposes; they are organized strictly on business principles, and unless this can be demonstrated as a business enterprise, I do not believe it is possible for us to reach improvements.

Dr. Bevan—I believe that the paper of Dr. Dalby touches a very important kind of work, and the question has occurred to my mind whether or not it would not be possible for this Academy to bring out results of some practical value in this line. Whether it would not be possible for us to very thoroughly, as an Academy, investigate this whole subject and formulate some practical rules which we, as the Academy of Railway Surgeons, could recommend to railway companies, even to State legislatures, or the Interstate Commerce Commission. It certainly is a very valuable line of work, and it must be carefully worked out by just such men as the members of this association. With this in view—this is merely a suggestion—I should think at our next annual meeting it would be well to have several papers covering this entire ground, not only in a general way, as Dr. Dalby has done, but in a specific way, with specific and practical recommendations to the Academy.

Dr. John E. Owens, of Chicago—I have for a long time felt that something in the direction of this paper should be done. In taking a long ride of 800 or 1,000 miles I have now and then watched the different varieties of the genus homo that refreshed himself or herself at the drinking fountain or water cooler, some evidently with pulmonary disease, tuberculosis, etc., and in a sleeping car, unless I am sleeping. I believe as the matter of tuberculosis is getting so well understood, slowly, it is true, by the public, and also in consequence of the existence of such papers as has been given us by Dr. Dalby, that the public, and consequently the railroad companies, will feel the evolution in the right direction and eventually we will have some attempt in the way of the construction of a car which will meet the objections presented by some of the luxurious cars in which we now ride. It will be a matter of very slow progress. I take it that some enterprising company will build one sanitary car and run that for a time; perhaps some other company as an advertisement will set forth to the public that the Sanitary Car will leave Chicago for Denver at 8:40, with no possible danger of any contagion or infection. It will come about in some such way, but the doctor can not do it unless he has the coöperation of the railroad authorities, as has been suggested, and with them the sanitarians of the country. The public health associations and all the represenative bodies of this character in the country will in time, I presume, coöperate and their united effort will bring about the desired results. Certainly all the conditions for the spread of such contagion must be present in both the day coach and the sleeping car, as has been set forth by Dr. Dalby in his paper. The public, as has already been stated, comes very slowly to a realizing sense of what they should do to protect themselves, They don't appreciate what is done by others; we see that in the hospitals. It is useless to give a consumptive in a car a spit-cup to use and to throw out of the window. The carpet that he does not own, and the floor will be used in preference to these, however accessible they may be. I have not anything to recommend.

Dr. Maynard—Following the paper of Dr. Dalby and following the line of Dr. Owens, I have noted for a great many years the unsanitary condition of cars, as a rule. All well-to-do consumptives travel by sleeping cars. It is through the agency of such an organization as this that we can do some good in a sanitary way. I happen to have a very close personal acquaintance, extending over a great many years, with the Pullman Company, the leading sleeping car company in the United States, and I know that Mr. T. H. Wickes, the vice-president and general manager, and Mr. Gusten, the general superintendent, are anxious to do all they can, not only to make the traveling public comfortable, but to make their cars sanitary. I know this fact from conversation with Mr. Gusten to-day that they will be very glad to do anything they possibly can in order to make their cars sanitary, and would, I believe, take the lead in any movement that might have the endorsement of such an organization as we are, and consider any well-formulated and well-digested plan that might be presented to them. As to railways generally, they are like the rest of us, after the dollar, and as long as the suffering public are not educated and will put up with it, they will give just such accommodations as will keep up their passenger receipts. But any well-defined and well-formulated suggestions from an association of this kind would receive, from the Pullman Company at least, not only a courteous reception, but would be met more than half way. I know the danger. I see the consumptives on the road, hear the cough, see the spit, and as a rule I ride on the baggage car to save myself. But I believe it would be well for us to formulate, in the line of Dr. Dalby's paper, a set plan and submit the same, not only to the sleeping car companies, but to all passenger carrying roads.

Dr. W. J. Galbraith, of Omaha, Neb. I fully appreciate Dr. Dalby's ability to write upon sanitation as well as his ability in the profession in general. While it may be humane and it may be sympathetic for us to look upon this matter in the way we have, I do not deem it in the province of this association to make recommendations that we are not called upon to make by our general managers. It would be just as absurd for us to make recommendations how a locomotive should be made, how a road-bed should be graded, etc., as to enter into something that has no connection whatever with our positions. We are employed as surgeons and physicians to railroads to care for the sick and injured employes and those for whom the railroads are responsible. It is the duty of the master car builder and his associates and the chief engineer to put into practical execution all these measures that we are discussing, and they are constantly working upon sanitation, as well as the general improvement of their rolling stock. They are men who are educated and and men whom our general managers depend upon to make such sanitary conditions, as well as safety conditions to transport their passengers. We have had in associations heretofore papers that have done railroad surgeons' associations a great deal of harm. I believe that the recommendations of Dr. Conn as contained in his paper have done more injury to the railroad surgeons and their societies than all other actions that have taken place during our short existence. We speak from a sympathetic and humane standpoint, which is all right. I appreciate that. I think it is all right for those things to be considered. At every discussion pertaining to the sanitation of cars, the first object has been tuberculosis. It is not directed to the public in general where the families intermingle and sleep together, in hospitals, where you have a tuberculous patient and one suffering from a different disease right next to him. Those things are not taken into consideration. We are not making recommendations in the proper channel. I believe that the paper by Dr. Dalby is a very valuable one; it shows good judgment and good sense, but if it is printed and the transactions sent to our general managers for review, we will be doing a great deal more harm than we will be doing good. It is something that we are not called upon to perform and it is not our duty to make those recommendations. Now the hospital care for the transportation of patients. This is a matter we have discussed in associations heretofore, and I have had it repeatedly from two or three different sources and from general managers, how absurd it would be for every trunk line to furnish cars for the transportation of tubercular patients. It is entirely out of the question that a trunk line

can afford to equip cars to start from Chicago to the Coast, to have a special car arranged for the transportations of tubercular cases. It is just as absurd as it is for the accident cars we have made recommendations for in associations I have been connected with. We have recommended that automatic couplers be immediately placed on all roads. What business have we to make such recommendations? None whatever. That is not our province whatever. I have fought the automatic coupler, I have fought the tubercular cars and the accident cars from the time our organizations of railroad societies started, and I hope this will be the last fight I shall have to make.

SANITARY REGULATIONS GOVERNING RAILWAYS.

Read at the Second Annual Meeting of the American Academy of Railway Surgeons, held at Chicago, Ill., Sept. 25-27, 1895.

BY L. E. LEMEN, M.D.

DIVISION SURGEON, U. P. RY., DENVER, COLO.

It is not often that a railroad surgeon is called upon to speak before you upon matters pertaining to public health. Yet, in this particular, we are not to judge the future by the past. This is truly the era of preventive medicine, because we find not only all branches of medicine battling against every scourge, but the public in general has its thoughts set on the laws which are apt to conduce to good health. It would seem that, at last, the laity has commenced to appreciate the meaning of the old adage: "Public Health is Public Wealth."

In the revolution that is now taking place in scientific and social circles to promote the health of the people it behooves the railway surgeons, and railway officials to pause for a moment as to their duties and capabilities. To remain inactive in matters of this kind will be considered criminal and costly, and instead of deferring the necessary preventive measures in certain diseases until the railroads are compelled by State and National statutes to observe laws more or less stringent and often impracticable, it would appear to be the part of wisdom, first in the railway surgeon to pay special attention to State and municipal hygiene and the laws of the different localities governing the same, and second for the railway managers themselves to instruct their agents to supervise and direct as much as possible the sanitary legislation referring to public carriers.

In all the concerted effort for the public welfare now taking place we find State medicine especially concerned in restricting the spread of tuberculosis in general, and tuberculosis of the lungs or pulmonary consumption, in particular. It is on the subject of the latter that I propose to speak more especially as a railroad surgeon.

The value of Koch's discovery in fixing the specific cause of phthisis to the invasion of the tubercle bacillus is magnified day by day as we contemplate the possibilities of State medicine toward stamping out disease.

That pulmonary phthisis is a communicable disease no one will to-day question. The mode of spread is various, such for instance as: 1, taking the germ of the disease into the system by drinking infected milk; 2, the ingestion of diseased meat; 3, from the expired breath; 4, accidental contact with the expectoration and the discharge from tubercuious sores; 5, inhalation of air laden with bacilli from dried tubercular sputa.

Of the methods by which the disease is communicated, the latter, namely, the inhalation of air laden with bacilli from dried tubercular sputa, is recognized to be the most common. It is in this mode of infection that the railroad surgeon is principally interested since overcrowding in cars, poor ventilation and faulty construction specially favor the spread of the disease.

We have every reason to believe in the potency of isolation for the restriction of the spread of tubercular disease, and we read the signs of the times from those boarding houses and hotels who now advertise for non-tubercular patronage at the same time that sanitarians are advocating the value of segregation of consumptives into properly built cottages away from populous centers.

Facts such as these offer suggestions of value to railroad officials. If it is manifestly dangerous to receive the tubercular subjects in hotels and boarding houses occupied by people generally what should be the rule to be observed in railroad travel in a country like ours where people have such a tendency to move about? Take for instance railroads leading to resorts for consumptives where a great percentage of the travel is done, especially at certain seasons of the year, by the infected class, and then figure on the ill effects of permitting the sick and the well to travel together.

The time has arrived when the railroad sanitarian must point out these dangers. As scientific men we do a great deal for the cause of preventive medicine. I believe it is important that we should recommend the following.

1. Segregation of the consumptives in railroad travel.

2. The compartments of the infected individuals should be constructed in such a way that disinfection and cleansing may be easily accomplished.

3. The sleeping cars should be provided with drapery easily laundered, and all drapery should be washed as often as once a month.

4. The bedding of the isolated compartments should not be interchangeable with that of the other part of the car, and articles like blankets and mattresses should be steamed at least once per month.

5. The dangers of spreading the disease through the medium of dried sputa should be stated in circulars conveniently posted in the isolated compartment, and the necessity of expectorating into spittoons and not on the floor or in handkerchiefs should be specially dwelt upon.

DISCUSSION.

DR. C. M. DANIELS—In the new instruction book I am issuing to the physicians and employes of the road I represent, I have added a clause directing surgeons, when traveling over the line, to make an inspection of the train and in case any unsanitary conditions are found, that attention be immediately called to the same and reported promptly to the chief surgeon.

REPORT OF FIVE CASES OF TYPHOID FEVER TREATED BY THE WOODBRIDGE METHOD.

BY H. SCHOENFELD, M.D.

TRENTON, OHIO.

Case 1.—Lena F., of Trenton, Ohio, age 21 years; single; a domestic; began ailing on April 16 with the characteristic symptoms of typhoid fever. Had been working in family where two long prolonged cases lay. Saw her on April 30 and put her on iron, quinin and strychnin pills; aconite and digitalis and used turpentine stupes. Pulse 120, temperature 102.2. Third day temperature was up to 103. Put her on Woodbridge tablets No. 1 every hour. Fourth day gave them every half hour. On fifth day put her on No. 3 in a liquid form which after a while caused vomiting, which finally became very bad; so I ceased its use, her chief complaint being in the

epigastrium. Kept her on No. 1 and used papoid, listerin with aconite, digitalis, etc. Normal temperature was present on the evening of the twenty-third day.

I did not understand treatment as it was my first experience with it. There occurred no hemorrhage, and the only complication was gastric trouble and hysteria.

Case 2.—Harry K., of Miltonville, Ohio, American, age 27 years; married; a farmer. Had been complaining for two weeks. We thought he had dumb ague. Nose bleed occurred on July 31. August 1 the tongue was thoroughly coated, felt tired and aching; rigors more or less all day; very tympanitic and sensitive. Pulse 78, temperature 102.4. Gave tablets No. 1 every hour for first twenty-four hours. Second day I gave them every half hour (when I got five evacuations from bowels), until evening of third day, when I put him on No. 3 in addition, in fluid form. Fourth day, noticed the breath to be offensive, some sensitiveness in mouth and gums, so took him off of No. 1 and used pot. chlor. during that day. I continued No. 3, but put him back on No. 1 again on fifth day and continued thus. Normal temperature on morning of fourteenth day and same next evening.

Up to this time I did not do my patients or myself justice, owing to the fact that I had these formulæ put up by my local druggist and had some trouble in their use. I procured medicines from Messrs. Parke, Davis & Co. for my next case and continue to use them.

Case 3.—Valandingham F., of Busenbarks, Ohio, American, age 24 years; single; imbecile; a farm hand. Symptoms of typhoid fever first showed August 31, but he lagged along till September 4, when I first saw him. The bowel lesion was very pronounced and sensitive. Pulse 80, temperature 102, A.M. Not having Woodbridge tablets with me I put him on iron, quinin and strichnin pills, with listerin, aconite and digitalis. Next day, after a very restless night, put him on No. 1 every fifteen minutes, and applied turpentine stupes. Continued the same treatment during the next day. On the fourth day added Nos. 2 and 3. Kept this up regularly, varying the treatment only with the action of the bowels, and he had a pulse of 69, and temperature of 98.6 on the morning of the ninth day and evening of the following day.

The patient was fairly strong and I discharged him with the strictest admonition to be a little careful of his diet, as he had been extremely sore. So things progressed well for fourteen days, during which time he was up and out, moving around and feeling fine. The whole family being of a low grade of intelligence, what this poor fellow did not think of and call for to eat, they reminded him of; among other things fresh pork just butchered. As he was somewhat of a glutton he stuffed himself, and on the evening of the fifteenth day of freedom, twenty-six days after the beginning of the sickness, he was taken with a heavy chill. Next morning at daylight I was hurriedly summoned and just before my arrival I found he had had a stool of pure blood; I think about two or three pints. The pulse was 96, temperature 103, considerable nausea, and the appearance of the vomit like a lump of pure putty, well greased. My prognosis was not favorable. I put him on the orthodox treatment to arrest hemorrhage and to sustain the heart's action and strength and gave No. 3 capsules as required. With six more hemorrhages and a considerably lower temperature he passed to the fourteenth day, when the temperature touched normal and remained so, and he lives to-day turning the scales at over 200 pounds.

Case 4.—Bertha S., Middletown, Ohio, American, age 20 years; single; a housemaid. I was call hurriedly by telephone on the morning of December 28 to Middletown, to see this patient who had been treated for ten or twelve days by a medical friend. He had diagnosed and was treating typhoid fever, which diagnosis I confirmed. I found a very sensitive right iliac fossa. Pulse 102, temperature 102.2. I put her on No. 1 every fifteen minutes, which brought about eight operations from bowels, and continued the next day the same treatment, with like results, when I substituted Nos. 2 and 3 for No. 1, but lengthened the intervals of the dosage a little too long and too soon, and we had a little elevation of temperature for a day or two only. When I saw her on January 8, after eight days of treatment, I found the temperature normal and it continued so. I saw her three more times during the next week and then discharged her.

Case 5.—Traveling man, age 39 years. This was a peculiar case; the patient, stout and robust, came home on February 24, complaining generally with grippe symptoms; he came into my office for medicine and again on the 25th, he being up and around all of the time. After forty-eight hours all aches, pains and chilliness subsided, but on the 26th he felt "tough," and on the 27th I was called in to see him. Found him stupid and glum, very bilious; the skin, white of eye, etc., at times being very yellow. That morning I took his temperature for the first time and found it 102, pulse 72 and regular, breathing easy, tongue coated down center, breath very offensive. There was no pain in right iliac fossa at all, but there was decided tympanites. I pronounced the disease to be perambulating typhoid. I immediately put him on No. 1 that evening; the temperature was 102.6, pulse 78. On the 28th the pulse was 78, temperature 101.4 A.M. He had rested fairly well, had seven or eight stools on the preceding day and in the evening his temperature was 102.8 and pulse 96. In spite of my directions he was given the tablets only every half hour. He rested fairly well that night. On the 29th the pulse was 96, temperature 103. I ordered No. 1 to be continued without fail every fifteen minutes, and if his bowels were not too frequent, two to be given at a time. Tympanites subsided and he was allowed to get up as he had complained of no ill feelings. I then put him on No. 3. There has been some nose bleed during the day. This patient had a normal temperature on the thirteenth day of treatment, both morning and evening; no tympanites; no soreness; no fiery-red tongue. He had some halucinations once in a while during his illness. He heard a train pass for the first time, although he only lives 150 yards from the railroad. He bled three times from the kidneys; hematuria. I gave him small phial of sanmetto and hydrang. lith., which checked this in forty-eight hours. He took No. 2 almost all the time during the attack. He complained of the throat and mouth, and kept constantly spitting, so I ordered a wash of listerin and hydrastis Canadensis.

Thus I have treated five cases of undoubted typhoid fever by the Woodbridge method without a death and with results which are not possible by any other method, and with every case I treat I am more and more satisfied and convinced that this treatment is the treatment *par excellence*. It is the richest possible boon for the victims of typhoid fever and I shall use no other. When asked recently by another physician if I believed it would do all that was claimed for it, I answered: "So certain am I that were I unfortunately stricken with typhoid fever I would not trust myself to the care of any physician who was not an expert in the management of the disease by the Woodbridge method."

A CASE OF COR BOVINUM AND HORSE-SHOE KIDNEY—NECROPSY.

Read before the Iowa and Illinois Central District Medical Association, April 9, 1896.

BY A. M. BEAL, A.M., M.D.

MOLINE, ILL.

On Jan. 3, 1896, Dr. B. F. Hall and the writer, assisted by Drs. W. K. Sloan and G. G. Craig, conducted a necropsy on the remains of O. N. R., an American, aged 43 yrs. 5 mos., which presented excellent specimens of the so-called cor bovinum and the horse-shoe kidney.

The heart was found to weigh forty ounces and measured eight inches in length, five inches in breadth, four inches in thickness and fifteen inches in its greatest circumference. The hypertrophy was due mainly to an increase in the muscular tissue of the walls of the ventricles, and no indications of degeneration of this tissue could be found. The hypertrophy was so nearly uniform in the walls of the two ventricles as to preserve quite completely the symmetrical appearance of the organ. The right ventricular wall was half an inch in the greatest thickness; the left, one and one-fourth inches. The columnæ carneæ of the right ventricle were much hypertrophied. The capacity of the ventricles was about normal. The aorta was very much dilated in its ascending portion and arch, measuring one and three-fourths inches in diameter, and there was marked failure of coaptation of both the aortic and pulmonic valves. Calcareous degeneration in the aorta extended from the valves upward an inch or more in such degree that scales or plates of the deposit fully one-half inch square could be detached.

The liver and spleen were much congested and

hypertrophied, the former weighing seventy-two ounces and the latter twenty-three ounces. The lungs were badly congested, particularly the right one, which was quite generally adherent and so atrophied from pressure that it had lost nearly one-half of its original volume.

Anatomically the curiosity of the subject was the kidney, which was of horse-shoe type. This organ, commencing at the usual place on each side, extended around over the spine and vessels in the form of a complete horse-shoe, and was twenty and one-half inches in length and weighed twenty-four ounces. It presented very little variation in thickness or breadth from one extremity to the other. The isthmus was true kidney tissue and there could be found no sinus or depression, separating the organ into two parts. Circulatory anastomosis was complete and there was but one arterial trunk, which sprang from the aorta at about the usual place of origin of the renal arteries, and divided into two branches at its junction with the kidney directly in front of the spine. Each renal arm possessed a distinct pelvis facing anteriorly and somewhat toward the spinal side, from each of which sprang a ureter, which passed downward anteriorly. At each extremity of the organ was situated a suprarenal body of about normal size, and near the left extremity was a cyst containing about two ounces of clear serum, which was probably formed by the occlusion of a uriniferous tubule.

Functionally, this anomaly of a kidney had been perfect, as its secretory process had been perfectly normal, except as disturbed by sympathetic congestion and a great excess of lithiates or urates. Its tissue was remarkably healthful, considering the circulalatory disturbances to which it had been subjected and the great excess of urates with which it had to contend, so that if good blood could have been properly supplied to it, the organ would have performed its function without a fault. It was only a congested kidney, with no evidences of degenerative nephritis, and certainly did not figure as an etiologic factor in the development of the cardiac hypertrophy, which is the condition of greatest importance in this case.

The pathologic condition in cardiac hypertrophy can generally be determined with a fair degree of certainty, even during life, but the pathogenesis is often very obscure.

The indications are, that in this case atheroma or arterio-fibrosis figured in the development of the cardiac hypertrophy. Degeneration could be detected, upon careful observation, in other parts of the arterial system than the region of the aortic and pulmonic valves. There is no rheumatism or rheumatic endocarditis, but there is a distinct history of symptoms that indicate increased arterial tension for a long period prior to the recognition of any heart lesion; so that it seems proper, in the absence of any other indications, to attribute the hypertrophy to disease of the arterial coats. This appears to be one of the exceptional cases wherein the kidneys were not seriously involved. Detection of the trouble was thus rendered the more difficult. In the usual case, with pronounced albuminuria and other indications of epithelial change, the cause can be more readily traced. The absence of these kidney conditions, however, may be due to the fact that the vascular changes have only involved other organs. In studying the etiology of atheroma and arterio-fibrosis, we find that the fibroid diathesis is most intimately associated with lithemia or uricemia. Whatever tends to produce decay will tend to produce these conditions, and a long train of causes could be enumerated, but the limits of this paper will necessarily confine our remarks to uricemia, or the uric acid diathesis, as that is the one that seems to have figured in the case under consideration. There can be no question as to the lithemic condition of the patient during the last six months of his illness. This, however, might have been a result rather than a cause, but careful and systematic inquiry reveals the fact that the symptoms of uricemia were present during the entire course of the cardiac difficulty and for a long period prior to its development, and a careful study of the family history indicates its heredity.

As to heredity in this difficulty, observations during the last year on ten cases of uricemia, with more or less cardiac disturbance, gave a distinct history of heredity in eight. This is probably above the usual ratio. The trouble seems to be more frequent with men than women, and it is found that laboring men do not escape, especially shop hands. This condition always represents defective oxidation and plays a more important part in the etiology of disease than is generally recognized. It will creep on slowly and stealthily at times, and is often recognized only when it has wrought serious disability. It is a prolific source of gastro-intestinal troubles, and the individual who fails to recognize this morbid element when it is the cause of dyspepsia, will be grievously disappointed in his prognosis and therapeutics, as will also the individual who fails to detect the increased arterial tension in the early stages of arterio-fibrosis. My paper is already becoming too long and I have been able only to offer a few suggestions, which it is hoped will stimulate the inquiries of others in this most important subject.

SELECTIONS.

A Neurologist's Farewell; Valedictory to the Graduating Class.

Back in the old homestead under whose kindly roof and within whose cherished walls you were sheltered from earliest childhood till the time came when you went out into the wide, wide world to begin the making of your fortune and to work your way to fame, perhaps, there sits at this very moment, doubtless, one who, slowly rocking to and fro in that cherished room which first heard the sound of your childhood's earliest prattle and witnessed your first feeble efforts at getting on in the world, is thinking, thinking, thinking only of you. Boys, it is your mother, or one who sustains to you the similitude of that sacred relationship. It may be your mother is among the saints in heaven and that her place is filled by an older sister or some other relative, or a nearer and dearer one far than all other. Whoever it may be, it is a woman. Some woman's heart and the blessed spirit of a woman's love has followed you here to-night.

It may be the fair faced, sweet eyed girl you left behind you at the gate of her father's house with warm hand press, an affectionate kiss and a manly promise to do your duty. If so, her noble injunction, "John, no matter how much I shall want to see you, don't come back without your sheepskin," has been one of the inspirations that has brought the triumph of this hour.

When you left your home, your father, too, who himself had learned and proven the value of character to a man working his way through the world, sterner and less tender perhaps in his manner, but no less sincerely interested in your welfare, said: "In the battle of life before you, be a man, my boy." "Be a hero in the strife." Do your duty. Be true to the principles of honesty, integrity and truth. Work and you will win. He said, perhaps not in words, but in heart:

"To thine own self be true
And it must follow, as the night the day,
Thou canst not then be false to any man."

And your mother, in her heart of hearts, what did she

say to you, my boy? She said, or felt, as that Roman matron felt and said to her son, as she bade him farewell and sent him to the front where the banners of Cæsar waved and the victorious eagles of ancient Rome were to float triumphant above the shout and din of battle and scenes of carnage, "Return with your shield or on it." And so does every modern mother say. She loves her son, but she would rather see him die in the strife than be a coward in the battle of life.

Gentlemen, you have won the fight. You may now go home with the trophies of victory. But this is but the first engagement of your campaign. You have endured its discipline and trials so far with persevering fortitude and admirable courage. You have marched into an unknown country, conquered it and made yourself its masters. I myself have led you from the fourth ventricle, the seat of origin of most of the cranial nerves, through the *iter a tertio ad quartum ventriculum*. You have surveyed with me the bridging commissures of the former and the valve of Vieussens that covers the latter. We have lifted up the fornix, found and removed the choroid plexus on its margin, and the *velum interpositum* beneath. We found the lyre there also, and you will find liars innumerable in your pathway in the world outside. In this vicinity underneath we found the corpora quadrigemina, and the little fourth nerve, and close by laterally and a little anteriorly, the geniculate bodies, and superimposed we found and removed the pineal gland with its sandy concretion which Descartes suppposed was the seat of the soul, because, I presume, he always found grit in it, which every true soul is supposed to have, and which you must all have, just as a chicken must have "sand in its craw," to live in this life of conflict in which the fittest survives, the best and truest fighter wins, while the unfit, the weak, the craven and the cowards fail and die.

You went into the foramen of Monroe and the lateral ventricles, into the basal ganglia (thalamus opticus, the corpus striatum) and the internal capsule, the external capsule, the claustrum and the insula on either side nigh them. You took a last view of the caudate and lenticular nuclei, the linea semicircularis before the operculum and the fillet of Reil, you followed me from the cortex down the motor tract between the caudate and lenticular nuclei and optic thalamus into the crura cerebri and under the Pontine Arch of Varolius into the decussation of the pyramids and saw the place of the lemniscus and back again to American soil, whence we started. You have made a neurologic excursion, a campaign of conquest, into the territory of the cerebrum and have won a victory. You voyaged over the circle of Willis up into the country of the Sylvian fissure, followed the irrigating artery of the contiguous territory, the anterior and middle lobes of the cerebrum, and studied some of its diseases which science seeks to conquer.

You traced the tractus opticus from the chiasm and beyond in the retina to its lair in the quadrate tubercles, geniculate bodies and the occipital lobes. You have looked with me from the mamillary eminences and between commissures of the thalami down into the third ventricular cavernus with naked eye or in fancy wandering, and crossed laterally over ventricular territory into the "*bodfi*" route of the Hippocampi majores. You sailed "around the horn" as it were. You have explored the convolutions of the psychomotor centers and their motor tracts, and the sensory tracts through the optic beds, and into the cerebellum by means of the three peduncles, and searched for the foes of health that lurk about these regions. You have stood faithfully around the demonstrator's table of our worthy colleague and your capable leader, Professor Keiffer, and been led along arduous pathways to glorious victory by each member of the faculty and they each and all commend your industry, your fidelity, your zeal, and a body of distinguished visitors has especially commended your enthusiasm.

In the campaign, you have acquitted yourselves like true soldiers of science, and in all the other lines of duty you have likewise, as the review examinations on which we base the bestowal of these parchments testify. They are you trophies and our awards of merit. If you labor as diligently, as faithfully, as courageously hereafter as you have done to this hour in all the campaigns of the battle of life before you, you will be victorious. And when you sit down to take a retrospective view of the conflict and your part in it, as men are wont do, and count up your triumphs and your failures, your weaknesses and your sins, and your strong efforts resistive of life's temptations, as all good men sometimes do, I trust that you will find that you have been faithful to the sacred trust these parchments impose upon you, that you have ever stood in all your dealings with mankind upon the high "vantage ground of truth," for no pleasure is comparable, as Bacon said, to such an attitude before the world. That you will have been virtuous, as your high and honorable calling demands, in all adversity remembering and getting the reward of the well known fact that,

> "The good are better made by ill,
> As odors crushed are sweeter still."

that you may glean from your life's trials and duties the true advantages of experience, growing wiser with years, subtler, deeper, and more logical and efficient in all that pertains to your own and your patient's welfare.

You have gone over much cerebral territory than I have enumerated. You have traversed the *terra incognita* of the soul's dwelling place in the seven layers of the gray matter and as you studied the ganglion cells of the gray cortex and marveled at the myriad cells for reception and emission of cerebro-psychic impression, you have realized how wonderfully wrought is the brain of man and come to comprehend with the physician's insight, "by sight of science," how, when time, or disease, or toxic agents touch these centers of mental impression and expression, normal function fails and is perverted in this supreme mechanism of the Great Architect, just as in the lesser mechanisms of puny man's contrivance. You have seen a center clogged by a clot of blood about and below the paracentral lobule and further down the Rolandic fissure and motion in the leg has ceased, and further down the bordering convolutions of the Rolandic fissure thus pressed upon, the hand has lost its cunning; if lower still the power of word expression and ideation has failed and if further back in the medulla the tongue has "cleaved to the roof of the mouth" and the heart and lungs have refused to do their normal duty. An aneurysm, an embolus or thrombus an extravasation or a focus or foci of softening has wrought this ruin in motor or vital centers of the brain; or the psychical centers from the same or other cause have been gravely pressed upon and the machinery of mind has stopped stock still or gone on with halting and perverted movement, with the mentality perverted and transformed, as in insanity or delirium. You have seen the effect of the unseen toxic touch of the intangible virus of a fever or a fatal drug on this wondrous cerebrum or its meninges, and finally you have seen how "the poor brain doth, by the idle comments that it makes, foretell (to you) the ending of mortality," when the disorganized blood of typhoid or typhus carries poison in lieu of nutrition to the ganglion cells of the gray cortex whose life in the organism is the true physiologic blood thereof.

All this and much more have you noted with me during the course which ends to-night. You have gone with me down the motor columns of the spinal cord, followed the direct and the pyramidal tracts and the posterior and likewise lateral sensory columns and noted their peculiar diseases revealing differing symptoms according to locality, as individuals do speech, according to the country of their birth and residence.

You have noted here especially the great reflex centers, particularly in the lumbo-sacral spine, the cilio-spinal centers of the cervical area and the vital reflex centers of the medulla and many of the nerve origins of the medulla and pons region. You have studied their significance in health and disease, appreciated their signal aid in diagnosis and wondered again at the intricate mechanism and nice adjustment to end in the machinery of man, comparing it with the machinery of man's contrivance; you have thought with Alexander Pope how,

> In human purpose, though labored on with pain,
> A thousand movements scarce one purpose gain,
> In God's one single can its end produce,
> And yet serve second to some other use.

Such is the mechanism of the cerebro-spinal axis, to say nothing of its attendant system of sensitive nerves in the sensory and motor and sympathetic systems with the wonderful ganglionic centers of the latter. But this neural journey into the vast territory of the neurones, neurils, cells and proliferations must end, like our most pleasant companionship of the past year. We have together fought away many obstacles and blazed many pathways in companionship with each other. We have marched through neurologia and neuropathia, psychiatria, and psychopathia to the open neurologic sea.

Besides all this you have looked with microscopic vision into the infinitely minute cosmos of the cerebral hemispheres, mesocephalon, etc., and spinal cord of man, and seen the potentiality of ultimate cells and the wondrous conducting power of microscopic strands of nerve fiber. You have with mental vision gone further, "where no eye can see, no glass can reach." You have heard this faculty "expatiate free o'er all this scene of man; a mighty maze, though not without a plan," as your progressing study proved.

In the great mechanisms of mind, sensation, perception, reflection, emotion, and the motor, nutritional and metabolic movements in the domain of the cerebro-spinal with its attached trophic and sympathetic systems, you have found indeed, a "vast chain of being which from God began" and dis-

covered how "all are but parts of one stupendous whole," like the great universe to which Pope referred, "whose life the blood is and the nerves the soul," as we know by sight of physiologic and chemico-biologic science, and the Roentgen rays of advancing science are constantly clearing our vision into the depth of things pertaining to medicine.—C. H. HUGHES, M.D., Professor of Psychiatry and Neurology, Barnes Medical College, and President of the Faculty.

SOCIETY PROCEEDINGS.

Tennessee State Medical Society.

Annual Meeting held at Chattanooga, Tenn., April 14-16, 1896.

FIRST DAY.

The Society was called to order by DR. D. E. NELSON, Chairman of the Committee of Arrangements.

HON. GEORGE W. OCHS, Mayor of Chattanooga, delivered an address of welcome to the city, followed by an address by DR. GEORGE A. BAXTER on behalf of the Chattanooga Medical Society. The addresses were responded to by DR. J. S. NOWLIN, of Shelbyville.

PRESIDENT G. C. SAVAGE, of Nashville, then took the Chair.

DR. T. J. CROFFORD, Memphis, read a paper on "Vaginal Hysterectomy." It was accompanied with a large number of drawings illustrating the subject. The principal point brought out was that every incision may be made and every ligature applied under the direction of the sense of sight.

DR. T. HILLIARD WOOD, Nashville, read a paper on "The Treatment of Ulcers of the Cornea."

DR. BENJAMIN BRABSON CATES, Knoxville, read a paper on

FRACTURES OF THE BONES ENTERING INTO THE FORMATION OF THE ELBOW JOINT.

Fractures of the bones entering into the formation of the elbow joint may be confined to any one of the bones, or it may involve all of them simultaneously. The symptoms of fracture of any of the bones at the elbow are theoretically simple, yet practically offer difficulties, due to the anatomic structures surrounding it, and again to the distance from the surface of some parts of the bones entering into the formation of this joint, as in the coronoid process of the ulna and the neck of the radius. The diagnosis of injuries of the condyles of the humerus not complicated by luxation of the bones of the forearm, if seen before there is much swelling, can be differentiated by grasping the condyles between the fingers and rubbing them to and fro. The condyles may be wider on the injured side. Should the fracture extend through the base of the condyles there is shortening. When the olecranon process is fractured there is gaping between the fractured process and shaft of the bone. There is not always the complete loss of power of extending the forearm. Should the coronoid process of the ulna sustain a fracture, it might be felt in thin subjects as a loose body in front of the joint.

If the upper extremity of the radius is fractured the close proximity of its head to the surface offers the surgeon a better opportunity for manipulation; since by pressing upon the head of the radius with the thumb of one hand and grasping the hand of the patient with the other, he can by pronation and supination tell with a fair degree of certainty whether the head or the neck of the bone is the seat of injury. If simple and seen before there is much tumefaction, and when involving the lower extremity of the humerus, the application of the roller bandage and an internal rectangular splint, or an anterior angular splint well padded, with a cap for the posterior surface of the elbow, may be applied. If the olecranon is fractured the object is to keep the fragment in contact with the shaft of the ulna, which can be done by means of compresses with adhesive strips, fortified by a figure of eight turn of the roller bandage and keeping the arm extended by means of a straight splint applied to the anterior surface of the arm and forearm. Should the trauma be of such a nature as to permanently injure the structures of the joint, as often happens in compound fractures, forming a liability to anchylosis, the arm should be placed in a position the most useful, which is nearly a right angle.

DR. J. S. NOWLIN, Shelbyville, read

A REVIEW OF THE PAST AND PRESENT PATHOLOGY AND TREATMENT OF UTERINE DISPLACEMENTS,

in which he says: "I do not believe that uterine displacements ever require treatment of any kind when the organ itself is not diseased. When symptoms are present it is the result of disease and not displacement. I do not believe that the retroposition ever interferes with the blood or nerve supply sufficiently to produce disease or pain. Rational treatment must be directed to the morbid condition and not to the position."

DR. T. J. HAPPEL, Trenton, read a paper on

IMMEDIATE OPERATIONS.

He cited cases of crushing injuries, etc., and makes the following deductions: Most important of all is the fact that each patient, and each injury, must be its own rule. No arbitrary rule can be laid down, by which to fix the time for an operation in cases of severe injuries. In slight injuries, with no shock, or very slight shock, the sooner the necessary attentions can be given the patient, the better. The prognosis in such cases is favorable. As a rule, patients from 10 to 25 years bear operations better than those younger or older. One more point to which I would invite attention is the fact that the presence of pus in operations for railway injuries is no proof of a want of proper cleanliness, or of proper antiseptic precautions. Crushed wounds, such as we ordinarily encounter in railway injuries, generate pus; that is, they heal by a granulation process in spite of our antiseptic or aseptic surgery. This condition of things, the failure to unite by first intention, is due in most cases to shock, which impairs nutrition, lessens the general vigor, and brings about blood changes, thus making a fitting soil for the growth and development of pyogenic cocci. Chloroform is the anesthetic employed in all of my surgical work.

DR. I. W. MOODY, Shelbyville, read a paper on "Croup."

DR. G. C. SAVAGE, Nashville, delivered the Presidential address: "Medical Progress; Its Helps and Hindrances." (See JOURNAL, page 799.)

DR. J. B. F. DICE, Morristown, read a "Report of a Case of Neurotic Bladder Trouble and subsequent Pyelonephritis; relieved by Nephrotomy."

DR. K. S. HOWTELL read a paper on

CHRONIC GASTRIC DYSPEPSIA.

Rapid eating and imperfect mastication are the chief exciting causes of all forms of dyspepsia. Mental strain or worry, etc., belong especially to the neuroses. The pathology of functional dyspepsia consists of either an atonic condition or an exaggerated irritability of the nerve supply. The treatment by dieting plays an important part, but may be too strict and too prolonged. Digestion begins in the mouth and any error as to cleanliness, thorough mastication and insalivation should be corrected.

Adjourned until 9 A.M.

SECOND DAY.

DR. S. S. CROCKETT, Nashville, read a paper on "Cancer of the Breast." The author held that since the atypical cells of cancer must originate from preëxisting atypical cancer cells, if all the atypical cancer cells are removed, in cases of cancer, there can be no so-called recurrence of the trouble. But if atypical cancer cells are left, these may proliferate and thus produce a so-called recurrence of cancer.

DR. H. J. WARMUTH, Smyrna, gave a paper on "The Radical Operation for Cancer of the Breast."

DR. W. F. GLENN, Nashville, read a paper on "Hypertrophy of the Prostate."

DR. G. B. THORNTON, Memphis, considered "Suburban Sanitation."

DR. G. W. DRAKE, Chattanooga, treated of "The Röntgen Rays: Their Prospective Utility in Physiology."

DR. A. B. COOKE, Nashville, discoursed upon "Fissura in Ano."

DR. C. M. SEBASTIAN, Martin, considered "The Germ Theory of Disease."

DR. J. L. CROOK, Jackson, dealt with the subject of "Sprained Ankles."

DR. J. A. CROOK, Jackson, took up

THE RATIONAL TREATMENT OF TYPHOID FEVER.

The paper contained a report of several cases of typhoid fever successfully treated by the so-called Woodbridge method.

THIRD DAY.

DR. W. S. SCOTT, Dickson, dealt with "Anomalies of the Umbilical Cord."

DR. PAUL F. EVE, Nashville, read a paper on

SURGERY OF THE PANCREAS, WITH REPORT OF A CASE.

The conditions deserving attention in a surgical way may be mentioned as those commonly found in analagous organs, as the liver, etc., such as carcinoma, sarcoma, abscess, hydatids, cysts, etc. Unfortunately, such affections as carcinoma, sarcoma and abscess of the pancreas have only been diagnosed after death, postmortem examinations revealing their true character. Wounds of the pancreas, partial rupture of the organ and severe contusions have been diagnosed and success-

fully treated. Portions of the organ, presenting themselves in stab and gunshot wounds, have been removed with complete recovery. The affection, however, with which we are best acquainted is cyst of the pancreas. Some of the causes which produce cyst of the pancreas may be enumerated as follows: Obstruction of the pancreatic duct, either by calculi or cicatricial contraction, the product of inflammation; displacement of the organ; pressure by tumor or aneurysm upon the organ or its duct, and traumatism.

The diagnosis of cyst of the pancreas is by no means an easy matter, and not a few cases are only cleared up by an exploratory incision through the abdominal walls. These cysts have been mistaken for hydatids of the liver, ovarian tumors, and in a few cases where the cysts were over an artery, for an aneurysm. It is only in a few cases where the cyst has attained a large size, that a diagnosis can be assured with any certainty. The history of the case should be carefully studied and the position of the tumor clearly outlined. The tumor is generally seen in the epigastric or left hypochondriac regions, having an elastic tense feeling, and is of rapid growth. Diarrhea and emaciation follow, due possibly to pressure from the cyst walls, and interference with the functions of the gland. Pain is experienced in the region of the pancreas, and to this some authors add a muddy complexion of the skin. A valuable diagnostic point is brought out in the insertion of a hypodermic needle into the cyst walls, the evacuation of the fluid and the examination of the same; the fluid in the great majority of cases being of a chocolate hue. In several cases reported the tumor was of large dimensions, the cyst containing nearly two gallons of fluid. The treatment of pancreatic cysts is divided into incision of the sac and drainage; the walls of the cyst being attached to the abdominal parietes, a drainage tube inserted, this being constantly shortened until finally removed, and the complete removal of the cyst. The objection to drainage by incision of the cyst is in some cases the establishment of a permanent fistula, the escape of the fluid into the peritoneal cavity, and the re-accumulation of the cyst after evacuation.

The ideal operation is the complete removal of the cyst from the abdominal cavity, as it removes these objections.

The essayist then reported a successful case of operation for removal of a cyst of the pancreas. The cyst occurred after the receipt of a trauma, in a patient who had previously been in good health, and seemed to indicate that pancreatic cysts can be produced by traumatism. The author believed this to be the second recorded case in which such a pancreatic cyst was successfully completely removed. During the operation the intestine was denuded of its mesentery for a distance of eight inches. The denuded gut was surrounded with an omental graft, with perfect success.

The paper and report were discussed by Dr. W. K. Sheddan, Williamsport, and closed by Dr. Eve.

Then followed "Professional Fads and Faddists," by Dr. W. K. Sheddan, Williamsport; "Treatment of Injuries of the Brain," by Dr. D. Y. Winston, Clarksville; "Indications for Trephining," by Dr. E. A. Neely, Memphis; "Report of a Case of Gallstones," by Dr. T. R. Moss, Dyersburg (see JOURNAL, page 775); "Pernicious Malarial Fever," by Dr. C. W. Womack, Chapel Hill; "Treatment of Hemorrhoids," by Dr. H. R. Coston, Fayetteville.

DR. R. J. MCFALL, Cumberland City, considered "Sciatica," in which he says: It may be a symptom of pregnancy, of affection of the retro-peritoneal lymph glands, of an intra-pelvic tumor, of foreign substance in the sigmoid flexure of the colon, and of a fecal mass.

Chicago Ophthalmological and Otological Society.

Regular meeting held March 10, 1896.

DR. GRADLE in the Chair.

Minutes of the last meeting were read and approved.

There were twenty-five members and visitors in attendance. Dr. J. B. Loring was elected a member.

The following amendment to the Constitution and new by-law was adopted:

Article III of the Constitution. "The members of this Society shall be graduates of regular medicine, who shall have practiced ophthalmology or otology for at least three years before the time of applying for membership."

Section VIII of the By-Laws. "Any member who shall remain in arrears for dues or assessments for more than six months after notification by the Secretary, shall be considered as having resigned."

On motion, the Secretary was instructed to arrange for a place of meeting suitable for all members.

DR. WOOD then reported

A CASE OF PIGMENTATION OF THE CORNEA.

This rather rather rare condition is illustrated by the following case; Mr. D., aged 56 years, came to Nov. 29, 1895, and from him Mr. Wood obtained this history: He has always been near-sighted and at school his eyes were weak and he was unable to study with any satisfaction. Has always had more or less vertigo and frontal headache, but until recently never noticed any redness of the eyes or sticking together of the lids in the morning. Two months ago he began to have supra-orbital pain on the left side extending to the top of his head. This hemicrania was very severe and continued for seven weeks, with some remissions, until a week ago, since when it has been continuous. For most of this time he was not able to sleep, and then only when under the influence of narcotics. He never had any pain in the right eye or right side of the head. After the second attack of pain he noticed that his eye was quite red, and that the vision was not quite as good after the pain had somewhat subsided. It was much diminished after the last attack, just before Dr. Wood saw him.

Present condition: Vision of the right eye=fingers at 4 feet; right, 15-200; with his reading glasses he reads Jaeger 4, but can not distinguish even the coarsest print with his left eye. O. S. T+2, shallow anterior chamber, motionless and semi-dilated pupil, several small posterior synechiæ, hazy, infiltrated cornea and doubtful cloudiness of the lens. The cloudy cornea, apon an examination with a strong Zeiss lens, focal illumination, window-reflex and the employment of flourescin and pyoktanin solutions was found to consist, first, of a diffuse interstitial infiltration about the center of the cornea, and of a punctate keratitis with the dots arranged in the usual pyramidal fashion, the base 6 or 7 mm. broad, intersected by fine vessels and the apex, where the spots are few and scattered, reaching almost to the middle of the pupil. No vessel advances into the cornea more than 2 mm. from the limbus and some of them appear to end in the dots, forming a picture like that of nerve filaments and the corresponding tactile corpuscles. Both the ciliary and scleral vessels are much engorged and the eyeball is tender. The condition of the fundus can not be made out.

With the exception of a marked refractive error the right eye appeared normal. Dr. Wood at once applied a 1 per cent. mixture of eserin to the left eye and gave ½ per cent. solution with cocain for use at home until the patient could decide about the operation which he suggested. On December 2 Dr. Wood did a peripheral iridectomy upward. Bleeding occurred from the iris and the anterior chamber was filled with blood. Two days subsequently the tension was considerably less (the wound having not yet closed); the pains had gone and the patient was able to sleep without having taken analgesics. The signs and symptoms of glaucoma now steadily disappeared, the aqueous cleared up until January 14 V. O. S.=15-200. The eye is very quiet and the man is able to do some work. The field of vision for white, left, is, however, greatly reduced and comprises an area bounded by the twentieth parallel. There is an opacity in the upper fourth of the crystalline which looks as if, in tearing away the iris from the lens, the anterior capsule had been injured. The ophthalmoscope, although the media are still hazy, shows a marked excavation of the disc. Feb. 3, 1896, the lens is now quite opaque, but the eye is absolutely quiet; tension normal or slightly increased; there has been no trouble since the last report. There is a rent in the capsule, corresponding in position with the cut edge of the iris, the edges of which are everted and faintly pigmented.

Jan. 21, 1896. In the cornea a little to the nasal side of pupillary center is a large, isolated, 1 mm. broad, rounded mass of pigment and toward the outer edge of the pupil a smaller one, also discrete. At the edge of the pupil when at its average size are minute scattered deposits, some of them arranged in chains, but most of them irregularly dotting the cornea. Then, directly downward is a perfectly clear band of corneal tissue about 2 mm. wide, entirely free of pigment, as we proceed still further downward from the pupil toward the limbus the fine dots once more show themselves until just before the sclero-corneal junction is reached the peculiar picture is presented of what seems to be round corneal dots undergoing a process of pigmentation. We then reach an area of hazy cornea, 6 mm. by 3, bounded below by the sclera. This contains a large number of capillaries, plainly seen to be extensions from the anterior sclera vessels, running past or into a regular row of medium-sized dots, about thirty in number that, are placed almost equi-distant from the limbus corneæ and one another. Some of these, especially at the center, are jet black, some are grayish and some are whitish, in all stages of pigmentation.

March 6, 1896. A portion of the diffuse inter-punctate hazi-

ness, just referred to, has disappeared, so that an entirely transparent cornea is seen in which the black dots, chains and irregular figures are planted.

The best descriptions of pigmentation of the cornea are given by Weeks, Treacher Collins, Vossins and Lawford. We notice in a majority of cases recorded by these authorities, 1, that they were mostly examples of some form of glaucoma, with increased and persistent intra-ocular tension; 2, there was bleeding into the anterior chamber; 3, there was brownish, smoky or other discoloration of the cornea, and 4, pigmentation was found at the limbus corneæ and in other parts of the anterior segment of the eyeball.

DR. PINCKARD had seen the case by courtesy of Dr. Wood. The central deposit looked very much like an anterior synechia that had been torn loose. There was no question in his mind that the deposits were on the posterior surface of the cornea. With a short focused lens, half an inch, they could be accurately placed on Descemet's membrane.

DR. HOTZ had also seen the patient and agreed that the deposits were on the back of the cornea. He had seen numerous cases of so-called serous iritis in which deposits on the posterior surface of the cornea had taken place. He believed that the pigment in these deposits came from the pigment layer of the iris. These deposits are sometimes so deceptive in appearance that they are taken for foreign bodies in the cornea.

DR. HALE said that in the German clinics one sometimes sees patients with pigmented corneæ, due to the tincture opii crocatæ.

DR. WOOD, in closing, said that there had never been any synechia in the case.

DR. MANN then reported cases of *purulent ophthalmia* treated by Dr. Scott's formula. The method adopted was strictly in accordance with Dr. Scott's instructions as presented to the Ophthalmolgical Section of the AMERICAN MEDICAL ASSOCIATION in 1894. The treatment consists, in brief, of cleansing with cotton for from 15 to 20 minutes, then cold applications and the instillation of a dropper-full of the hydrastin solution. Dr. Scott claimed for the treatment, that in acute cases abortion took place in from three to five days, and in older cases in about a week.

DR. WÜRDEMANN, of Milwaukee, said that the hydrastin was beneficial, but that it is not more so than boric acid or similar antiseptic solutions used in the same way, and he does not find that it has a specific influence in mitigating conjunctival inflammation, or that it materially cuts short the course of the ophthalmia. In a personal letter from Dr. Scott to Dr. Mann, dated March 5, 1896, he says that Dr. Würdemann is the only one who has failed to have uniformly good results; and that Dr. Scott had received oven one hundred letters from gentlemen over the country whose results have been uniformly good.

DR. MANN'S experience was limited to a few cases, but the results have been remarkable.

Case 1.—Baby; first seen August 8, when two weeks old. The disease had existed since the fourth day. It presented the ordinary appearance of an ordinary purulent ophthalmia of mild type. Prior treatment had been simply cleansing. The corneæ were clear; swelling and discharge moderate. A solution of boric acid was ordered every half hour, and a 2 per cent. silver solution applied daily. In the next two weeks there was not much change, although the silver was increased to 6 per cent. By this time the left cornea had become involved, followed in a few days by the right. The condition of the lid had slightly improved, but there was still considerable discharge. September 1 to 10, the case was in Dr. Starkey's care during Dr. Mann's absence from the city. Dr. Starkey continued the silver solution and used as high as 10 per cent., but with no lasting benefit. Both corneæ were perforated; anterior staphyloma in the left with anterior synechia. In the right there was a small perforation with anterior synechia. With Dr. Starkey's approval the hydrastin solution of Dr. Scott was ordered. The result was immediate improvement. The mother said there was no more pus formed after the first drop was used. When the baby was seen the next day there was only a slight muco-purulent discharge, and in forty-eight hours there was no pus, nor did any reappear. Dr. Mann feels satisfied that if the hydrastin had been used earlier the baby would now have two good eyes.

Case 2.—Baby, with purulent ophthalmia of moderate intensity, which had existed about two weeks. Both eyes were affected. Directions were given to clean the eyes frequently with boric acid solution and to use the hydrastin solutions four times daily. The mother was told that if the eyes did not seem a little better the following day to return. This was on Thursday. The following Monday she returned and Dr. Mann found on examination only a very slight purulent discharge, which entirely ceased within a week from the commencement of the hydrastin solution. In this case no silver was used.

Case 3.—This case was similar to the above, but the disease was more pronounced. The lids were markedly swollen and there was a profuse discharge. Similar treatment and instructions were given as in the preceding case. Three days later the swelling was all gone, eyes wide open, only a slight muco-purulent discharge remaining. Corneæ clear.

Case 4.—Male adult. Gonorrheal ophthalmia of the right eye; the disease had existed in the right eye when the case came under Dr. Mann's care. The lids were swollen shut; there was chemosis; the cornea infiltrated. The eye was cleansed and a few drops of the hydrastin solution dropped in it. Instructions were given to have the eye washed every half hour with boric acid solution and the hydrastin solution used every three hours. The next day the swelling was some less and the amount of pus very much diminished. At the end of forty-eight hours there was no pus and but little swelling. The cornea, however, was so deeply invaded that it subsequently sloughed at the center.

All of these cases Dr. Mann had personally seen. Two of them showed very positive results. In both silver had been previously used, but in none was silver used during the same time the hydrastin solution was used. In every case silver would have been used had there not been decided improvement within twenty-four hours after the use of hydrastin. The Doctor thinks if we can get equally good results from this treatment by hydrastin, it should be preferred to the treatment with the strong solutions of nitrate of silver. The disadvantages of silver are that it requires a skilled hand in its application, and it is dangerous to the cornea. With the hydrastin solution there are no dangers to avoid.

DR. COLBURN does not advise the use of silver in any form. He has not used it for years, nor has he used the hydrastin solution. He has never had a cornea infiltrated in his experience. His method of treatment is thorough cleansing of the eye with a pipette with a neutral peroxid of hydrogen solution, 1 to 3, in water, this being followed by a hot peroxid of hydrogen solution, and finally filling the eye with borated vaselin. The most important part of the process is thorough cleansing with the peroxid of hydrogen.

DR. WÜRDEMANN read from Dr. Scott's original article: "This plan has robbed purulent ophthalmia of all its terrors. In all cases there is a marked improvement in twenty-four hours. Th patient is almost well in forty-eight hours, and is always well in ten days." Dr. Würdemann had used Dr. Scott's method in fourteen cases, but he had found that the hydrastin solution was no better than a boric acid solution. There were four cases in which the cornea became stained and ulcerations started. He had had one case recently, however, in which the amount of discharge seemed to be lessened, but he had never seen any such results that approached Dr. Scott's claim.

DR. STARKEY had seen the case spoken of by Dr. Mann and the result seemed to be marvelous from the solution. He had not been able to satisfy himself why this was so, and it was not a coincidence in the treatment.

DR. HALE said that the presence of the gonococcus in the diagnosis of the cases was of the utmost importance; that such purulent cases may not be gonorrheal in character.

DR. MONTGOMERY had never used Dr. Scott's formula, but had no faith in it. His method of treatment consisted in the use of strong silver solutions with cleansing of the eye.

DR. HOTZ had had no experience with the Scott solution. He was entirely satisfied with the results obtained from solutions of silver nitrate combined with washing of the outside of the eye frequently with water. He did not believe that any nurse or parent was able to cleanse the inside of a baby's eye, and therefore never recommended it.

DR. HAWLEY had had little experience with hydrastin in eye diseases, but had used it considerably in urethral cases. He thinks it of value.

DR. HOLMES had no fault to find with the treatment by nitrate of silver. He applies the silver once a day carefully, and cold applications were kept up the rest of the time.

DR. GRADLE spoke of the apparent effect on a case of ophthalmia neonatorum by the attenuation of the virus, that is, in a case from an old gonorrhea in the father. The resulting ophthalmia neonatorum is very different from that of a recent case in the father.

DR. MANN, in closing, said he had started out with no faith in the Scott formula, nor would he now depend on the formula alone for the treatment of any case of gonorrheal ophthalmia. But he proposed to use it in selected cases, watching carefully for any increase of the disease, in which case he would use silver as he had done before.

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SATURDAY, MAY 23, 1896.

THE ANTI-VIVISECTION MOVEMENT.

"And God said, Let us make man in our image, after our likeness; and let him have dominion over the fish of the sea, and over the fowl of the air, and over the cattle, and over all the earth, and over every creeping thing that creepeth upon the earth." Genesis I: 26.

"For thou hast made him a little lower than the angels, and hast crowned him with glory and honor.

"Thou madest him to have dominion over the works of thy hands; thou hast put all things under his feet." Psalm VII: 5, 6.

The cranks, with and without wheels, delight to assemble in Washington near the close of a session of Congress. They infest the rotunda, they swarm in the lobbies, they lie in wait for the passing member of Congress, and they button-hole the patient Senator in the Marble Room. No scheme so visionary, no sentiment so false, no project so absurd but it has its crank advocates, and sometimes when these vagaries come veiled in the cloak of philosophy these advocates swarm like the camp-followers of an army.

Just now the hungry wild-eyed fanatic has his mind fixed upon the passage of a bill which, if it become a law, will close the laboratories of the Public Service and stop physiologic experimentation under Governmental auspices. If this were all, the spectacle might be viewed with the same mild surprise and curiosity as that produced by the "COXEY" tatterdemalions of a year or two ago. But unfortunately, the passage of this law will be a signal for the commencement of a similar raid upon the State Legislatures, and all experimentation on animals will cease. It is needless here to recapitulate the long list of useful experiments that, performed on animals, have resulted in discoveries which have prolonged human life and reduced the sum of human suffering; for that has been ably done by many scientific men who have had a reluctant or partial hearing before the Senate Committee. The Committee having charge of the matter at the Atlanta meeting went to the root of the subject as follows:

WHEREAS, the members of the AMERICAN MEDICAL ASSOCIATION recognize the fact that the developments of scientific medicine have resulted largely from experiments upon the lower animals; and

WHEREAS, anesthetics are habitually administered to animals subjected to painful experiments; and

WHEREAS, restrictive legislation is in our opinion unnecessary and opposed to the continued progress of medical science; and

WHEREAS, it is an unjust reflection upon the humanity of those engaged in animal experimentation to enact laws requiring them to use anesthetics and appointing inspectors to see that they do so; and

WHEREAS, far more unnecessary pain is constantly being inflicted upon the lower animals for sport and for game than in biologic and pathologic laboratories; and

WHEREAS, no evidence has been presented by those who advocate restrictive legislation showing that abuses exist in the District of Columbia; and

WHEREAS, results of great practical importance have been obtained by experiments on the lower animals made in the Government laboratories in the District of Columbia; therefore be it

Resolved, That the AMERICAN MEDICAL ASSOCIATION earnestly protest against the passage of Senate Bill No. 1552, entitled, "A Bill for the further prevention of cruelty to animals in the District of Columbia," or any modification of this Bill, unless it shall first be shown by an impartial investigation that cruel and unnecessary experiments are being performed in the District of Columbia, and that existing laws do not provide suitable punishment for cruelty to the domestic animals.

Resolved, That copies of these Resolutions, attested by the signatures of the President of the AMERICAN MEDICAL ASSOCIATION and of its Committee appointed to draft these resolutions, be sent to the Chairman of the Committees on the District of Columbia, in the House of Representatives and Senate of the United States.

(Signed) DR. NICHOLAS SENN,
DR. WM. OSLER,
DR. GEO. M. GOULD,
DR. J. MCFADDEN GASTON,
DR. DONALD MACLEAN.

From the days of Aristotle who tried the effect of various drugs on the tortoise, to the present day, when the demonstration of the pathogenic microbes has been actively made upon guinea pigs and rabbits, medical knowledge has made its great strides by means of vivisection or experimentation upon the lower animals, over which the CREATOR gave man dominion at the creation. It is quite probable that only a few of these fanatics are vegetarians and yet the only legitimate outcome of their argument would be to close the fisheries, the vast meat industries, and to allow the beasts, insects and fishes to flourish, unchecked by and without regard to the needs and uses of man.

Where, O misguided misanthropic antivivisectionist! will this thing stop? Will you draw the line on the warm-blooded animals, and allow the scientists control of the creeping things? Or will you include them also within the sacred inclosure where no experimentalist dares to tread? And the bacteria themselves, even the cholera microbe and the despised tubercle bacillus, are they not living organisms? Are experimenters to be barred from testing microbic powers of endurance? Is the fanatic quite prepared, on his exclusive bean diet, to even forbid the scientist from punishing a wicked flea or putting salt on the tail of a pathogenic microbe? Come Messrs. the antivivisectionists, let us have a clear definition of your tenets and the reasons for your alleged belief.

If experimentation on animals were for purposes of speculative science only, there might be a glimmering of reason in the outcry against it, but, on the contrary, these experiments almost without exception have the highest practical value, and the attained results are made use of throughout the civilized world immediately.

It is to be regretted that these experiments can not be made on some inanimate object, but man has not yet learned the exact nature of the vital spark, and the exact line of demarcation between the machine and that which vivifies it. We must therefore pursue our physical inquiries on living machinery, tissues having bodily functions to perform. This necessity makes animal experimentation indispensable to further progress. Biology is not yet exact; we must learn much, and the only direct avenue is through anatomic investigation and physiologic experiment.

The days of the Ptolemys, who gave the living condemned criminals to the knife of the anatomist, are over, and we have now only animals, over which the CREATOR gave man absolute dominion, for experimental purposes. Can our antivivisectionists provide a substitute? Or do they really intend that philosophic inquiry in this direction shall cease? We fear that they have moved and are moving in this matter not only without knowledge of the facts and of the great benefits which experimentation on the lower animals has conferred upon humanity, but in most cases in wilful ignorance and mischievous demagoguery.

In conclusion, we urge that as the ASSOCIATION has no standing committee on legislation, every member should at once write his Senator opposing it.

A PROPOSED INTERNATIONAL COMMISSION ON INSANITY.

It is stated in one of our exchanges that notice has been given in the British Parliament of a resolution to the effect that it is desirable in the interest of the general welfare that an international commission be appointed to investigate the causes of insanity, the rapid increase of which in all civilized countries is becoming one of the most important of the social questions of the times. Just what this proposed commission is expected to do is not stated and it is not, at first sight at least, easy to see what an international body can do to any greater advantage than one confined to a single country as regards direct beneficial results. Scientific questions, it is true, are not national ones in any limited sense, but for this very reason whatever of valuable truth is elicited in one country is at once common property to all, and therefore the chief value of an international commission would seem to be in the possible greater weight of authority that it could give to its findings and recommendations. While, however, its decisions might have the highest scientific authority they could hardly expect to effect more than to add a little possible enlightenment to officials, rulers and legislators, and it is extremely questionable whether it would materially affect their actions to any considerable extent. The questions that would necessarily come before it, the effects of intemperance, immorality, the stress of modern civilization, the consequences of the prevalent militarism of the present time in Europe, of emigration, of popular social and religious tendencies, of special diseases, etc., have been and are constantly being discussed and investigated, and it is doubtful whether any really new data would be developed by the labors of such a commission more than by the various scientific workers at present engaged with them. The most we could expect of it would be the discussion of perhaps a wider range of statistics, and a more authoritative utterance on these subjects, provided the commission was properly composed of those whose words and opinions would carry sufficient weight. It need not be questioned that there might be a certain amount of benefit derived from an official international inquiry but no extravagant expectations will be realized, and it is not easy to see how between European nations there can be any effective international coöperation for the betterment of the existing state of affairs.

As regards America, however, there is one question that might well be an international one. Many of the European countries have long been in the habit of unloading their insane and other defectives upon us and the *rejecta* of the Continental and English asylums are to be found in nearly all our hospitals for the insane. There is no reciprocity in this, it is almost altogether one sided and we are the sufferers. If any kind of an international commission would help to do away with this imposition we certainly should be the first to welcome it.

SMALLPOX AT GLOUCESTER, ENGLAND.

The *Sanitary Record*, April 24, quotes a presentment by the April grand jury in which a demand is made for the enforcement of the vaccination laws by the Local Government Board, and that the laws be so changed that local boards of guardians be relieved from the duty of enforcing vaccination. This presentment strongly urges "the immediate vaccination of all unprotected children and the revaccination of adults as the only means of stamping out smallpox in the city."

The health officer's (DR. F. T. BOND) latest published report gives the following statement regarding the number of cases and deaths in the first quarter of 1896 as follows:

It is alleged by antivaccinators that vaccination gives no protection against smallpox. Let us see how far the experience of the epidemic in Gloucester up to the present time supports the assertion.

Up to March 27 the cases admitted into the Smallpox Hospital since June last from the City of Gloucester, and their results so far as the cases have yet terminated, are as follows: Persons attacked, 365; not vaccinated, 207; vaccinated only in infancy (chiefly adults), 158; revaccinated (fourteen years ago), 1. Deaths, 81; not vaccinated, 70; vaccinated only in infancy (chiefly adults), 11. Proportion of deaths 23 per cent., or one in five; not vaccinated, 33.8 per cent., or one in three; vaccinated only in infancy (chiefly adults), 7 per cent., or one in fourteen. Of the seventy unvaccinated deaths all but three were children under 10 years of age. Two of these three were 11 and 14 respectively, and the third was 21 years of age.

It is clear, therefore, that smallpox is a terribly fatal disease to young and unprotected children. In fact, it is a veritable *slaughter of the innocents*. Not a single death has yet occurred in a vaccinated person under 24 years of age, and death in the case of most of those who did die was attributable, in part at least, to the influence of other causes. It is, therefore, equally clear that vaccination gives a degree of protection against death from smallpox for the earlier years of life which is, for all practical purposes, nearly certain, even when it does not altogether protect against an attack of the disease.

The great majority of the unvaccinated children who recovered had the disease very severely and will be badly disfigured through life. Some of them will be blind. The great majority of 158 persons who are recorded as "vaccinated" were adults who had been vaccinated in infancy only. Many of them had very poor marks and were therefore badly protected from the first; and in the remainder the influence of their first vaccination had more or less faded through time, and yet most of these imperfectly protected persons had the disease so lightly that they will not be disfigured at all by it.

The ages of these 158 vaccinated persons were as follows: Under 10 years, 2; under 20, 42; under 30, 50; under 40, 35; 40 and over, 29. The ages of the unvaccinated were as follows: Under 10 years, 179; under 20, 14; under 30, 9; under 40, 1; 40 and over, 4. This confirms what doctors and all persons of experience assert, that proper vaccination, while giving almost certain protection during the first ten years of life, loses its effect gradually, though it gives some amount of protection throughout life, just as an attack of smallpox itself does. Only one case of a person who is said to have been revaccinated before exposure to the risk of infection is known to have been admitted into the hospital, and she was vaccinated fourteen years ago. Of all the medical men, trained nurses and all attendants who have, after being revaccinated, been brought into frequent and close contact with the disease in the city since the commencement of the outbreak, not one has taken the infection.

Instances of unvaccinated persons who have caught the disease, and of vaccinated persons who have escaped, in the same family, are very numerous. Among the above 365 cases there are a large number still in the hospital, many of whom are very ill, and among whom deaths must be expected, which will make the case in favor of vaccination still stronger than it is from the above numbers. There are also a large number of cases, both in the city and suburbs, for which there was no room in the hospital. The record of many of these cases has yet to be taken, but from what is already known of them, they will still further confirm the evidence in favor of vaccination which is afforded by the hospital cases.

The following is a portion of an article in the *London Times*, showing the active interest taken by the great national Local Government Board to secure a reëstablishment of vaccinal protection in that community, and for thirty miles about:

The Board of Guardians of Gloucester is getting frightened at the disaster their fault has brought about. They issued notices to the public, for the first time in some ten or more years, urging the people to be vaccinated and revaccinated; and, getting still more alarmed, about a week since they actually decided to attempt to undo the mischief of past years, and passed a resolution deciding to enforce the compulsory clauses of the vaccination acts. It is officially stated that the Local Government Board, in view of the altered attitude of the guardians, has sent a medical inspector to Gloucester to aid, so far as is now practicable, in organizing a system of public vaccination, and it is strongly held in official minds that in vaccination and revaccination lies the only hope for the escape of the city from further spread of the disease. Dr. Parsons, one of the assistant medical officers of the Local Government Board, is the officer selected for this arduous and humane and also dangerous duty, and he is already at Gloucester assisting the local authorities in every way in his power. The Local Government Board has also issued notices to the guardians of unions within a radius of thirty miles of Gloucester, calling attention to the action they should take in preventing the danger of the importation of the disease from the infected city. The very leader of the antivaccination heresy has climbed down and has "submitted to the operation against his convictions but for the public good," probably thus saving his own skin after having been the means of putting hundreds of lives in jeopardy.

It may be stated that the Town Council from the first did their utmost by isolating the sick in hospital, by disinfecting houses, burning clothes and bedding, and placing relatives of sick in practical quarantine, to stay the outbreak. Finding the outbreak gaining, they built extra hospitals, and have now hospitals for 120 patients, but the disease continued to spread with such virulence that it was quite beyond their power to cope with it.

ECONOMY IN LIFE INSURANCE AT THE EXPENSE OF MEDICAL EXAMINERS.

The *Pacific Medical Journal* enters its protest against the reduction of the fees of medical examiners, if retrenchment is not also carried out in other directions. It says, with great truth, that many of the life insurance companies are feeling the effects of hard times. They find it necessary to economize, and have concluded to reduce the medical examiner's fee. There is not a board of directors of any life insurance company in the land that believes the medical examiner is overpaid or even sufficiently paid. Nor is there a board that believes that it would be economy to employ an irresponsible examiner.

The directors do know, however, that medical men will submit to almost any form of imposition from corporations that if the older examiners will not submit to a reduction, there will be no difficulty in getting good men to take their places. The medical profession should stand together in this matter. For a company that pays its president $100,000 a year, to reduce the medical examiner's fee in order to economize, is simply an insult and indignity to the medical profession. Physicians can live without the assistance of life insurance companies, but life insurance companies can not do business without the services of the medical examiner. It is clearly the fault of the profession and not of the companies if a reduction in examiner's fees is tolerated. A united profession and the fees will stand; divided and the fees will fall. Examiners should bring this matter before every medical society in the whole country, obtain the support of the whole profession, and

the companies will be compelled to economize where economy will be in the interest of the insured. Perhaps the companies could do with less extravagant and costly buildings, for instance.

THE "RABID ANTISEPTICIST" AND INFECTED BOOKS AND BANK-NOTES.

Here is a new word for the makers of dictionaries, the "antisepticist" (meaning probably the antiseptic crank), for which the editor of the *Press and Circular* appears to be responsible. The new term finds its origin in the following annotation on infected books, papers and bank-bills:

The Paris Academy of Medicine has been engaged upon the discussion of a communication by M. DU CAZAL, in which he records his experiments respecting the danger of infection from books. It goes without saying that he found abundant microbes on the pages of books, especially those lent out from libraries, and that he found it impossible to effectually disinfect them. The sequence, we assume, is that no one should read a book unless it is uncut and fresh from the press, and that, even in that case, the reader will have to run the gauntlet of a lesser army of microbes. The question suggests itself, where is this microbe craze to stop? Or at what point does it become ridiculous? Is there any article touched from morning to night in our daily life which is not open to the same objection in a greater or lesser degree than the circulating library book? The most rabid "antisepticist" accepts with satisfaction a bank-note reeking and saturated with germs, and carries it about with him into every sick chamber into which he enters. Where is the consistency?

THE JOURNAL SPECIAL AND THE "QUEEN AND CRESCENT."

"But man, proud man,
Drest in a little brief authority,
Most ignorant of what he's most assured.
His glassy essence, like an angry ape,
Plays such fantastic tricks before high heaven
As make the angels weep."

We have received a letter from a valued member, at the request of the railroad, deprecating the exposure of the methods of SUPERINTENDENT STEVENS in dealing with the members of the JOURNAL party at Cincinnati in a recent issue, and offering as an excuse that there was an agreement to deliver to the Queen and Crescent some six sleeping-car loads of people from the "Big Four" on the JOURNAL Special train. We were not responsible for opposition parties, and there was no such agreement, the JOURNAL simply urged as many as possible to go that way, and urged those who wished to join the Special elsewhere than at Chicago to join at Cincinnati and Indianapolis. There were therefore a sufficient number with those in waiting at Cincinnati, to make up a greater number than we had anticipated. We had made no definite promise. Now the facts are as stated in a previous issue, that MR. STEVENS compelled us to await the arrival of the thirty-three persons who were with DRS. MOYER and WHITMORE of MR. G. S. DAVIS' *Medicine* party. That party was about four hours late, and the only possible reason why we were kept waiting was to save the expense of a special engine to haul them to Chattanooga; they were not going to Atlanta on our train, but were on an entirely different excursion route, intending to remain the next day at Chattanooga, and whatever may be said in extenuation, MR. STEVENS held us supperless in Cincinnati, and the time lost then made us late into Chattanooga, where our first stop was made for breakfast at 10:30 A.M., that is to say, from dinner at 3 P.M Sunday until 10:30 A.M. Monday. All these things were explained to the great potentate, but he refused all requests and laughed in our faces, although nearly every male passenger made a personal appeal to him. That his phenomenal brutality should hurt the Queen and Crescent railroad is apparent, and if they are sorry for it they have a plain remedy, that is to repudiate MR. STEVENS and all his works, at the earliest possible date. It is possible that even the Queen and Crescent railroad may discover that it is not good railroad management to treat a hundred physicians and their families as a train load of immigrants. We are sincerely sorry for an otherwise excellent railroad and a passenger department, handicapped by such injudicious, indiscriminating, and inhumane officers. "*We* own this road" said MR. STEVENS, "this is *our* train, and we shall hold you until the Monon people arrive." That is the sum of MR. STEVENS' "concession," and so far as we are aware, nothing else was at any time contemplated by that mighty man, although our people had no more to do with the party in question than with any other party of excursionists in any other part of the Globe, except to wish them a safe and independent journey. If it hurt the Queen and Cresent people to have this JOURNAL tell the truth about their superintendent, we are sorry, but we must insist that a special train load of physicians traveling on any railroad shall be treated with the consideration and respect due their education, services and standing in the community, and not like a drove of cattle or a lot of immigrants traveling at immigrant rates. When this lesson shall have been thoroughly learned by certain railroad "magnates," the episode of MR. STEVENS will have had a useful outcome.

ASSOCIATION NEWS.

AMERICAN MEDICAL ASSOCIATION.

ADDRESS OF WELCOME ON BEHALF OF THE LOCAL MEDICAL PROFESSION.

BY FRANK M. RIDLEY, M.D., OF LA GRANGE, GA.

Mr. President and Gentlemen of the American Medical Association:—I would confess that I am profoundly sensible of the distinction conferred upon me by my professional brethren which places me here. Aside from an apprehension of my

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fitness to properly perform the task, it would be a labor of love to extend to you their greetings.

Such a welcome comes not alone from this fair city, which is the pride and marvel of us all, but from the great heart of this great commonwealth, stretching as it does from the sunlit summit of Lookout to where the crested billows break upon the white sands of our coast.

Founded in the wisdom and generosity of Oglethorpe, it was the youngest and feeblest of the old thirteen original colonies who by their conjoined efforts threw off the yoke of British domination on the plains of Yorktown. Not only so, but by their pronunciamento sent forth from Independence Hall they, like the Veiled Prophet of Khorassan, "shouted freedom to the world," and thus started that great political movement which means "universal emancipation" and which to-day, it may be, is thundering at the gates of Moro Castle for the deliverance of liberty-seeking Cuba from the distress and ills of Spanish thraldom. In the meantime Georgia has grown to such proportions as to be recognized in no dubious sense as the Empire State of the South.

Here, then, gentlemen, in this capital of the Empire State, I bid you greeting; here under the shadow of Stone Mountain, that huge bowlder upheaval from abysmal depths by some titanic force of pre-historic ages; here, in earshot of the "willow-fringed" Chattahoochee, described by our own Sidney Lanier as "springing in the hills of Habersham, and shouting through the valleys of Hall," as on it flows upon our western border 'mid banks of blooming flowers and springing ferns on its "eternal journey" to the Mexic sea.

Then, gentlemen, I bespeak the sentiment not only of my profession but of my State, when I say we rejoice at the gathering in our midst of this distinguished body of medical savants coming, as you do, from no pent-up Utica, but every part of this great nation, "from the slopes of the sea that sleeps, to the banks of the sea that's wild," from all sections of this boundless continent, composed of two score and more sovereign States, "distinct as the billows, one as the sea." We recall your former convocation in our midst, we miss the faces of those who, having served their day and generation, have passed to a higher state of existence, and to-day, "they rule our spirits from their urns."

In the meantime our profession has grown apace in all its branches. I do not exaggerate when I say that from the golden age of Pericles, when Hippocrates wrestled with that fearful plague which almost decimated Athens, until the days of Benjamin Rush, when the mercurial and the lancet constituted the chief armament of our materia medica, there was less advancement in the science of medicine than for the past half century; what the progress of another decade will be, the wisest of our number is unable to predict.

Organization with its concomitant influences has enhanced our achievements. The special work of individuals upon special lines has perhaps contributed more than aught else to an advancement and accomplishment. What political economists since the days of Adam Smith have designated as the "division of labor," has contributed more than aught else to the advancement of mechanical arts. Indeed, the steam engine would never have materialized but for the conjoined and con-

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secutive efforts of Watt and Stephenson; the cotton gin of Bull and Whitney, the spinning wheel of Arkwright, the ocean steamship would never have been perfected but for this "division of labor." What is said of the mechanical holds true of the higher arts. When Galvani touched, with a wire connecting a zinc and a copper plate, the muscles of a dead frog in his laboratory at Bologna, and caused it to leap like a thing of life, he instituted a new science. Thus by a special and individual study, Jenner discovered the vaccine virus, and by it curtailed the ravages of a dread disease and robbed it of its terrors. Koch discovered the bacillus which has destroyed so many useful lives, wrecked so many happy homes, and "hangs still like a pall" over humanity.

Pasteur has thus been able to counteract the subtle venom of the rabid dog. Lister has discovered antiseptics and thus almost revolutionized surgery, and our own Crawford Long discovered an anesthetic which has made the capital operations of surgery painless to the sufferer. Marion Sims applied the silver suture and thus instituted a new era in gynecology. Indeed, gentlemen, time would not avail me to mention one-tenth of the discoveries and applications of specialists in special lines which have given to medicine and to surgery the certitude of the exact sciences.

You, gentlemen, have come to further advance in your special sections the principles which these pioneers promulgated, and "they builded wiser than they knew." In behalf, then, of my profession I bid you greeting. Here, on this typical southern May day, 'neath as lovely a sky as ever blessed the vision of the Mantuan bard, in a veritable atmosphere of hospitality, as bright as our sunshine, and as "sweet as the breath of the roses which bloom in our wildwood," I bid you welcome, thrice welcome, to this happy, prosperous, proud old commonwealth.

ADDRESS OF WELCOME ON BEHALF OF THE CITIZENS OF ATLANTA.

BY HON. JOHN TEMPLE GRAVES, OF ROME, GA.

Ladies and Gentlemen: You have just listened to an eloquent address from my friend Dr. Ridley, who has welcomed you to this beautiful city of Atlanta. The medical profession of Georgia is very fortunate in having a man so eloquent and versatile as Dr. Ridley. I congratulate myself upon the fact that I was born in the same year, attended the same college, although Dr. Ridley is some twenty years older than myself. (Laughter.) While I have enjoyed the rich and mellow eloquence of Dr. Ridley I have also enjoyed no less the benediction of the distinguished chaplain.

Beyond the ascription of praise to the Divine Power, which is always appropriate, it seems to me that the assembling together of a thousand doctors should be the occasion of prayer and profound concern to all classes of people. While the reverend and distinguished gentleman did not mention it specifically in his prayer, I think in his spoken aspiration to the hereafter he voiced the silent longing of this vast audience for a resting place in some better country where the doctors cease from troubling and the lancet is at rest. (Laughter and applause.)

Dr. Ridley has spoken the professional welcome of the city and the State. I speak for the helpless multitude—the outsiders—your victims, who languish under your lancets and are riddled by your horrid pills. I thank heaven that we have corralled you at last within the prison of our hospitality. You are harmless here. The geographic limit of your licenses has expired and the city is safe. If we should remove the legal

ban, if we should turn loose a thousand doctors on this helpless town, if we should add to the eager skill of our own professionals, the expert genius of this great convention, there is not a "liver" in Atlanta that would be safe to-night.

Atlanta is proud beyond expression of her brilliant galaxy of physicians. We support 200 doctors in this happy town, maintain them in the most lavish splendor and the most indolent leisure. There is nothing here for them to do. In the elixir of this incomparable air, and under the blue of these cloudless skies there is never an ailment that an old woman's nostrums wouldn't cure.

In the very desperation of their idleness, our physicians have been forced to forage. In the poverty of actual causes they have reached down into the sacred recesses of the human abdomen and dragged to the unwilling light a useless, obscure and infamous "appendix" on which to exercise their leisure and vindicate their skiil. When the yellow scourge visited our southern coasts, this city of salubrity opened wide its arms to stricken refugees, and Westmoreland I., the distinguished father of the brilliant son radiant, with confidence in this higher air threw open his office to every suspicious case, and after ministering to their earlier symptoms drew down the drapery of his couch about him and lay down beside them in placid safety to pleasant dreams.

Our doctors here are almost without exception millionaires. They practice only on the stranger within our gates. They live in stately mansions, drive in splendid carriages and spend their time in thumping the soundest of "livers," and in feeling the steadiest pulses that ever beat in unison with the hope and progress of the healthiest and bravest city in the South.

There is not in all the world a better place for a doctor's holiday. Here you may lie down in peace to pleasant slumbers, and not a wave of trouble roll across your peaceful breasts.

But let me say in serious measure, that the city for which I speak is set in its very shape and structure to the end of hospitality. Its four great thoroughfares point the compass. Within their wide and generous angles they sweep all sections of the Republic. In their steady growth from center to suburb they have conspicuously or unconsciously assumed the shape of four extended arms, and these arms are now and always have been wide stretched in welcome to the world.

Atlanta is nature's city of conventions, framed for hospitality by its parts, its purpose and its generous soul. And the year behind us has been rich in accepted opportunity. Within the last two months of 1895 we banqueted around our social boards the press associations of twenty-six States, the governors and their State-house officers of twenty States, the mayors and municipal governments of the fifty representative cities of America. Around the hospitable mahogany of this new capital of the South that has risen like a phœnix from the ashes of the old, friendships have been formed, and sentiments of fellowship have been pledged that will be redeemed in the fulness of fraternity with which we shall march with locked arms through the stately stretches of our common and glorious future.

We make a new bond with this great convention. In the long visit of conventions which have met within our gates, not one has had a heartier welcome than we give to you. In war or peace, in sickness or in health, your great profession has been the healing and the solace of the world. In all this stately city, and in all this sovereign State, there is no home into which in some hour of gloom and sadness the physician has not come like incarnate comfort to the heart of grief. And in the flush and glow of rosy health it is a poor heart which does not in memory go backward from the sunshine to the somber shadows through which you moved in healing, like the benediction of the Lord. Next to the ministers of Almighty God, and linked in holy union with their blessed work, we hold here the mission and the record of your service to mankind. And with all our hearts we give you greeting.

No other assembly could be more grateful to the heart and judgment of Atlanta. No greeting given to commercial convocations, no demonstration over literary lions, no blare and stir of bugles over gathered politicians shall vie in sincerity with the heartfelt greeting which we give to you.

Turn your stethoscopes upon us; level your heartscopes, your brainscopes, try us with the Roentgen rays of all intuitions, and you will find that Atlanta, city of conventions, abating no jot or tittle of the sincerity of any past profession, has held in her heart her last and most loving welcome for the doctors of America.

SOCIETY NEWS.

International Congress of Dermatology and Syphilography.—This Congress will be held in London this year, August 4 to 8. Eight subjects are announced for discussion as follows: Prurigo, keratosis, syphilitic reinfection, relations between tuberculosis and cutaneous troubles, duration of the contagious period of syphilis, trichophytosis, polymorphous erythema and malignant syphilis.

Indiana State Medical Society.—The forty-seventh annual meeting of this Society will be held at Fort Wayne, Thursday and Friday, May 28 and 29, 1896. The approaching meeting promises to be the best in the history of the Society and an unusually large attendance is expected, and it is particularly desired that the members not only make every possible effort to be present throughout the entire meeting, but that they bring their families with them and put in two days of profitable enjoyment. Every regular physician in the city of Fort Wayne is a committee of one to see that visiting members receive such treatment as may be expected from a progressive, enterprising and hospitable fraternity. Railroad rates of a fare and one-third are granted on all Indiana railroads, on the certificate plan, provided at least one hundred members avail themselves of these rates.

National Association of Railway Surgeons.—This Association, after one of the most important conventions in its history, adjourned *sine die* May 1 at 2 o'clock. The sessions were characterized by hard labor and diligent application to the important business in hand. The Convention was opened April 29 by Dr. W. B. Outten, Chairman of the local Committee of Arrangements. Health Commissioner Starkloff welcomed the visiting delegates to St. Louis in a brief address, in which he paid a glowing tribute to Pasteur, Lister and others who have helped to make a new science of surgery. Dr. F. G. Lutz replied in behalf of the visitors, and President J. B. Murphy then delivered his annual address. The latter reviewed the history of railway surgery from the time when round-houses were the hospitals and piles of ties the operating tables. The following papers were presented: The first was by Dr. T. H. Briggs, of Battle Creek, Mich., on "Surgical Treatment of Injuries of Spinal Cord and Column." The discussion was participated in by Drs. Outten, Hart and Jackson and President Murphy. Dr. S. R. Wooster read a paper on "Rupture of the Bladder with No Evidence of External Injury." The third paper was by Dr. Cassius D. Westcott, of Chicago, on "Traumatism of Eye-ball." Dr. Emmett Welsh, the Secretary, read a paper on "Color Blindness:" Dr. A. Alt, of St. Louis, read one on the "Tumor of the Lachrymal Gland," and Dr. James Moores Ball read an essay on "Eye Symptoms of Brain Tumor."

At the second day's session papers were read by Drs. E. R. Lewis, of Kansas City; J. H. Dixon, of Springfield, Ill.; J. B. Murphy, Chicago; A. H. Levings, Milwaukee; J. J. Buchanan, Pittsburg; George W. Crilley, Cleveland; John B. Deaver, Philadelphia; Harold N. Moyer, Chicago; Thomas H. Manley, New York, and John H. Punton, Kansas City. The surgeons were invited to Alexian Brothers' Hospital in the afternoon to a clinic with Roentgen ray features.

Dr. Emory Lanphear, of St. Louis, read a paper on "Why Railroad Surgeons Should Not Try to Practice Aseptic Surgery," which was virtually a reply to Dr. W. B. Outten's paper,

read before the Convention Thursday. Dr. J. A. Fulton, of Kansas City, also read a paper on "Inflammation of Bones." This closed the business of the Convention and an adjournment *sine die* was taken.

The new officers elected were: Frank J. Lutz, of St. Louis, President; Dr. Cassius D. Westcott, of Chicago, Secretary; Dr. E. R. Lewis, of Kansas City, Mo., Treasurer. The Vice-Presidents elected were Dr. W. R. Hamilton, of Pittsburg, Pa.; Dr. J. H. Letcher, Henderson, Ky.; Dr. Eddy, of Utica, N. Y.; Dr. Hutchinson, of Montreal; Dr. A. C. Wedge, of Albert Lea, Minn.; Dr. Goode, of Macon, Ga., and Dr. Lee, of Omaha, Neb.

The Executive Committee consists of Dr. Albert 1. Bouffleur, of Chicago; Dr. J. N. Jackson, Kansas City; Dr. James A. Duncan, Toledo; Dr. J. B. Murphy, Chicago; Dr. W. S. Thorne, Toledo; Dr. W. D. Middleton, Davenport, Iowa; Dr. J. A. Barr, McKee's Rock, Pa.

Proceedings of the Congress of the French Association for the Advancement of Science.—This association of savants met at Tunis, April 1–5. (Reported in *Bulletin Médical* April 5, 8 and 22.) In the Section on Medicine Hanot presented a careful study of "Cancer of the Ampulla of Vater," reviewing the eleven cases on record, with one new one. The clinical picture comprises chronic, progressive, apyretic icterus, with discoloration of the feces, medium hypertrophy of the liver, gall bladder and spleen, without severe pains, increasing emaciation, and death in five to nine months. Histologic examination shows the cancer to be a cylindric-celled epithelioma. In Hanot's case, which had a much longer duration than the rest, there was constant leucocytosis, which favored the supposition of a cancer, while the absence of urobilinuria negatived the idea of any important hepatic lesion. The icterus gradually subsided; the necropsy showed that the obstacle to the flow of bile had not been removed, but that the bile had undergone the transformation which Hanot calls pigmentary acholia. The patient's health had always been robust until two years previously, when he had entered the Bichat hospital for a fractured malleolus, and he stated that his serious trouble dated from that time, the emaciation, icterus, etc. A vegetating, non-ulcerous mass was found at the necropsy, about the size and shape of a chestnut, adhering to the mucous membrane of the ampulla of Vater, in which it had developed, projecting downward into the intestine which it did not obstruct at all, although it closed the pancreatic and common bile duct, entering it at this point. Considering the relative frequency of other orificial cancers, Hanot is surprised at the rarity of this kind, and he queries whether surgical intervention might not be successful with such a limited growth. Bard continued the subject by comparing this form with cancer of the pancreas, which it clinically resembles, while cancer of the duodenum partakes of the character of cancer of the stomach and of the pylorus, with a different set of symptoms due to obstruction of the alimentary canal. He considered cancer of the ampulla of Vater to be of pancreatic origin, starting in the excretory duct and characterized by a relatively slow development, by the absence of generalization and the variability of the icterus.

Cartaz described two forms of "Facial Paralysis from Otitis following La Grippe," one where the paralysis ceased at once with puncture of the tympanum, releasing the serous fluid that compressed the nerve, producing the paralysis; and a second form where the paralysis persisted, showing that the inflammation had extended to the nerve.

Bard has always found in cases of cancer of the pancreas with glycosuria, that there was a secondary cirrhosis of the pancreas accompanied by secondary cirrhosis of the liver due to the same cause. Glycosuria, therefore, while it does not prove the existence of a pancreatic cancer, is an aid to diagnosis when it accompanies an icterus from obstruction. It shows that this obstruction is in the pancreatic as well as in the biliary ducts, and therefore favors the assumption of a cancer of the head of the pancreas rather than a biliary obstruction from some other cause.

Voisin reported the case of a woman affected with melancholia, hallucinations of persecution, aphasia, word blindness, agraphia and hemiopia, following a severe attack of pleuropneumonia, which he had completely cured by hypnotic suggestion. He also carried her afterward through childbirth without her having the slightest knowledge of any of the events of her accouchement.

Double syphilitic gummy tumor in the spinal cord, producing complete paraplegia of the lower limbs and trunk, and the symptoms of syringomyelia, with absence of knee jerk and foot clonus, continual incontinence of urine, paralysis of the rectum and unequal movement of the pupils, was the clinical picture of a case described by Hanot and Meunier, which terminated fatally in five days. They made 198 sections of the spinal cord, as this is such a rare disease, that they only knew of eight cases on record, with microscopic researches in three. They first established the fact that the tumors were not tuberculous, and then proceeded to explain the startling suddenness and violence of the attack by showing that the paraplegia had been menacing for some time, evidently, the pyramid so compressed by the tumors situated each side of the spinal cord, at the level of the first left dorsal and the second right, that it only required some slight arterial thrombosis to upset the balance and produce the ictus and the above symptoms then proceeded evenly on both sides. The syringomyelia and the peculiar zones of anesthetic and hyperesthetic skin, they explain by the fact that the sensory conductors of heat, pain, etc., from different zones of the body, do not follow the same path in the spinal cord. While the former enter the brain through the funiculus gracilis, the others (heat and pain) form part of the gray matter itself. The former, therefore, entered a portion of the spinal cord which was intact, passed into the funiculus gracilis, which was not affected and skipping the seat of the lesions, passed on into the brain. Those which started in the upper part of the trunk, were right in the midst of the lesion. To this is due the difference in the sensations in different zones of the body. The connection between the sensory and motor disturbances corresponded in this case with Brown-Séquard's "spinal hemiparaplegia with crossed hemianesthesia," only with the peculiarity that it was bilateral.

CORRESPONDENCE.

Typhoid Fever; Another Witness.

BLAKESBURG, IOWA, May 16, 1896.

To the Editor:—Prove all things; hold fast that which is good.

Whilst the mortality from typhoid fever continues to run so appallingly high, the true physician should never tire of reading any and all articles within his reach that will tend to throw light upon the subject, or aid him in reducing that mortality. The great number of deaths still reported from the ravages of typhoid fever is a stigma upon the whole medical fraternity—is truly mortifying in the extreme.

It may be true that some of our brethren jump at conclusions too hastily—are to ready to accept new theories and adopt new remedies: yet it is also true that many are too slow to admit that "there is anything new under the sun." They manifest a stoical indifference—even a dogmatic sarcasm and a stubborn skepticism, regarding all new discoveries, even when they are launched upon us by one whom they regard as eminently orthodox.

While the silent cities of the dead continue to grow so rapidly, the true physician has no moral right to show this stolid indifference. It is indeed not so surprising that the laity become skeptical, that they in a great measure lose confidence in all doctors and readily take to patent nostrums, faith-cures and Christian science.

But I wish brevity to be one merit of this letter, and laying aside all theories and all discussions upon the etiology and pathology of typhoid fever, I wish to add my testimony on the therapeutics of the disease.

What the laity ask of us is to cure the disease, to save their loved ones from an untimely grave. Must we turn a deaf ear to their cry? Do we not owe to the world something better and more promising than the old régime in the management of this dreaded disease?

As regards typhoid fever, I believe the problem has been solved. I do now believe we can cry out: Eureka! I am naturally somewhat skeptical myself; am slow in accepting new ideas, but I have always been in constant search after demonstrated facts. I do not now wish to be over-enthusiastic, but I most sincerely believe that the name of Dr. J. Eliot Woodbridge should, and will be handed down to coming

generations, on the golden pages of history, along with those of Jenner and Pasteur.

After having read the reports of scores of physicians in the AMERICAN MEDICAL ASSOCIATION JOURNAL and elsewhere, and after a personal experience in over seventy-five cases, I am convinced that the treatment now known as Dr. Woodbridge's antiseptic treatment of typhoid fever, is as surely prophylactic and curative, as is quinin an antiperiodic; that it will greatly modify the severity of the disease, even in the later stages, and will *abort typhoid fever*, if begun early and rigorously carried out.

My experience with the Woodbridge treatment has been most gratifying. To be able to carry my patient through, even when not seen in the first week, in from fourteen to twenty-one days, with a temperature seldom above 102.2, without delirium, with the mental faculties clear, with but little tympanites, without hemorrhage from the bowels, with a liberal allowance of food, with no grave complications and with rapid convalescence, is certainly very gratifying.

It is needless, here, to give the Woodbridge formulæ in detail. The readers of the JOURNAL have them. I only urge all who have not tested them, to do so and be convinced. First of all, be sure that you have *pure* medicines and have them compounded under your own supervision, and then have the attendants follow your instructions most implicitly.

I doubt not that Dr. Woodbridge can and will, in the near future, simplify his formula No. 1. I will here state that in a few cases, I did not find the mixture No. 2 well borne. To these cases I gave guaiacol carbonate alone, omitting the eucalyptol. Guaiacol carbonate is well borne by the most delicate stomach and is more easily administered to children than the liquid. I advise no auxiliary treatment, save the sponge bath, cleanliness and plenty of fresh air, with an accasional diuretic if necessary, and a dose of bromidia at night if the patient does not rest well.

Just here I would caution against the use of any of the coal tar products in typhoid fever, no matter how high the temperature runs. Shun them as you would an infernal machine.

Yours respectfully, C. N. UDELL, M.D.

Medical Directors of Life Insurance.

DENVER, COLO., May 12, 1896.

To the Editor:—In our JOURNAL of April 18, mention is made of the annual meeting at Richmond of the "Association of Life Insurance Medical Directors," on April 30 and May 1. Can you inform me who and where are the officers, secretary especially, of the Association?

S. T. MCDERMITH, M.D.

PUBLIC HEALTH.

Queensland for Consumptives.—The *Australian Medical Gazette* states that tuberculosis is almost unknown in the Queensland-born population. It also says of Australia at large that phthisis is decreasing in prevalence.

Connecticut Candy not to be Adulterated.—Any person who shall adulterate candy with terra alba, barytes, talc, or any other mineral substance, or with poisonous colors or flavors, or knowingly sell or offer for sale, candy so adulterated, it was enacted in Connecticut in 1895, shall be punished by a fine of not more than $100.

To Prevent Blindness in Connecticut.—Should one or both eyes of an infant become inflamed, or swollen, or reddened at any time within two weeks after its birth, it shall be the duty, under penalty, according to a law passed in Connecticut in 1895, of the midwife, nurse, or attendant having charge of such infant, to report in writing within six hours, to the health officer or board of health of the city, town or borough in which the parents of the infant reside, the fact that such inflammation, or swelling, or redness of the eyes exists.

Commissioners of Pharmacy in Connecticut.—Section 3118 of the general statutes of Connecticut was amended in 1895 by striking out in line two thereof the words "one reputable physician and two" and inserting in lieu thereof the words "three reputable," so that the section now reads: "There shall be three commissioners of pharmacy, ocnsisting of three reputable pharmacists, to be selected by the governor from six persons to be annually nominated to him by the Connecticut Pharmaceutical Association."

Antitoxin of Alcoholism.—M. Toulouse has conceived the idea of finding an antitoxin for alcoholism. He administered to a dog 40 grams of ethyl alcohol daily during a week. He then took some serum from the animal, and injected 24 grams in three doses into a patient suffering from delirium tremens. The next day the temperature was lowered, there was less fever, and the patient became rational. M. Toulouse is following out his research to ascertain if the serum acted as an anti-alcoholic serum or only as a non-specific serum.

To Prevent Spread of Hydrophobia in Florida.—Sections 769 and 772 of the Revised Statutes of the State of Florida were amended in 1895, adding hydrophobia to the list previously composed only of yellow fever, smallpox and cholera, to be quarantined against (though it is provided that in cases of hydrophobia the State health may be represented by any authorized agent or agents of the State board of health in investigating with regard to same), and giving to the State board of health power to make, promulgate and enforce such rules and regulations as may be necessary to prevent the importation and spread of hydrophobia.

Sanitary Control of Milk Supplies.—In line with the now accepted dictum that the dairy farm is the chief source where milk becomes infected, Health Commissioner Emery has appointed a Dairy Inspector, whose duty will be to investigate the sources of the entire milk supply of Brooklyn. He is charged with the duty of examining the cow stables, the number of animals therein, their sanitary condition, the water they drink, and the drainage of the stables. If, in his opinion, any feature of any of the dairies is unsatisfactory, he has power to prohibit the sale in Brooklyn of milk from that establishment.

California Coroner to have Stenographer.—It was made lawful, by act of 1895, for the coroner of every county, or city and county, in California, having 100,000 or more inhabitants, to select and appoint an official stenographic reporter, at a salary of $150 a month. It is made the duty of such reporter to attend all inquests held by the coroner and report in shorthand all testimony of witnesses, and all proceedings of such inquests, and to transcribe the same into legible longhand and furnish two typewritten copies thereof, to certify the same, and file one of the copies with the coroner, and the other with the clerk of said county or city and county, and also file with such clerk the original shorthand notes.

Health Officer can not Enjoin Maintenance of Hospital.—The supreme court of Wisconsin decided, March 10, 1896, in the case of Buckstaff v. City of Oshkosh, that there is no power, express or implied, under the Wisconsin statute directing town health officers "to take such measures for the prevention, suppression and control of contagious disease as may be needful and proper, subject to the approval of the board of health," authorizing the health officer, either in his own name or in the name of the board of health, to enjoin the maintenance of an isolation hospital for contagious diseases near the town. But, whether the action lies, or, if so, whether it can be instituted without authority conferred by the electors, the court does not undertake, in this case, to decide.

Nuisances Injurious to Health in Florida.—An act was passed in Florida in 1895 defining at considerable length and declaring what shall be deemed nuisances to health, and to provide for the removal thereof and punishment therefor. It makes it the duty of the State health officer, upon the request of the proper authorities, or of any three responsible resident citizens, or whenever it may seem necessary to the president of the State board of health, or to the State health officer himself, to investigate the sanitary condition of any city, town or place in the State; and if upon examination, the State officer shall ascertain the existence of any sanitary nuisance as defined in this act, it shall be his duty to serve notice upon the proper party or parties to remove or abate the nuisance, or if necessary, to proceed to remove or abate the nuisance.

Curiosities of "Quarantine."—A bill before Parliament to abolish the last trace of quarantine in England induces *The Hospital* to call attention to the fact that the plague had disappeared from England for more than thirty years before the practice of quarantine against it was definitely established by Act of Parliament in 1710, and that, with the exception of yellow fever, plague still remains the one disease against which the provisions of the Quarantine Act are still in force. While the sanitary administration has been dealing with every other kind of malady, the responsibility of taking precautions against these two diseases continued, and still continues, to devolve upon the Imperial Government, which has neither quarantine establishments nor isolation hospitals for the purpose. So far as plague is concerned this does not matter, but yellow fever is epidemic in ports with which England has considerable trade, and it was imported into Swansea in 1865, when it caused a considerable mortality. *The Hospital* thinks it high time, therefore, that its control should be handed over to the sanitary authorities.

Dangerous Athletic Exhibitions should be Restricted.—The *Boston Medical and Surgical Journal* asks a very pertinent and searching question: "Are these hazardous trapeze performances allowable in civilized communities?" The recent accident to a trapeze performer in Boston, in which a fall from the trapeze produced a fracture of a cervical vertebra, calls renewed attention to the dangers of such exhibition and emphasizes the question: "Are they worth while?" The ratio of the interest to the risk we will not undertake to estimate, but this much, at least, can be said, that these accidents result, as in this case, from the necessity which the performers are under of meeting their engagements often when they are not in the best physical condition. In New York, the "Human Arrow," as she is called in the play-bill, is in daily jeopardy from the chance that an accidental discharge of her mammoth crossbow may cause her to fall a distance of thirty feet. The other night the bowstring caught her at the back of her head and knocked her senseless, but her brother was able to reach and rescue her just at the moment of falling. And yet these cunningly devised enormities have no sanction of law for their prevention.

The Buffalo Medical and Surgical Journal.—The exclusive management of the June issue of that periodical has been entrusted to the medical ladies of that city. There will doubtless be a great demand for that issue from all parts of the country. If the time were not so short, we would like to submit for their consideration the following proposition, taken from the *Medical News:* One of the metropolitan papers has been devoting attention to the microscopic examination of the street dirt found adhering to the dress skirt of a lady after an afternoon's shopping in New York. It reports to have obtained from one skirt, besides innumerable innocuous and unclassified organisms, the germs of fever, influenza, anthrax, and diphtheria. This means of transferring virulent matter from the streets to the house is, without doubt, a frequent one, and very naturally suggests two very important sanitary reforms, to-wit: Cleaner thoroughfares and shorter skirts. The sense of supreme security which the new woman feels in this particular must be regarded as some compensation for her more or less complete self-denial of the ordinary female garments.

Departments of Health Have Oversight of Shop-women.—A bill to protect the lives and health of deserving and industrious young women and to give them relief from much suffering has become a law in New York State. This bill fixes the hours for women and children in mercantile establishments at sixty hours per week, or an average of ten hours per day, excluding Sunday. Thus, if such employes are kept two or three hours longer at work on Saturday than on any other day in the week, the extra time must be made up by deduction from the labor of other days. The bill further provides that chairs shall be provided for women who are now kept standing for hours without rest, a practice productive of many serious ailments. It is also made the duty of the Board of Health to examine cellars and toilet rooms where women and children are employed and to give certificates as to their sanitary condition. A specially onerous duty has been devolved on local boards of health in a requirement for the medical examination of all shop-girls under sixteen years of age, the keeping of records of a detailed character and the issue of certificates to children requiring them and undergoing the prescribed examination.

A Timely Rebuke.—Under the laws and ordinances—not of New York city only, which is the *locale* of the following words of protest from a contemporary (*American Medico-Surgical Bulletin*, April 25)—professional men are obliged to report to boards of health the presence of diseases of an infectious nature occurring in their practice. This duty is cheerfully conformed with, since it is recognized as requisite in order to enable statistic data to be properly kept, and also because it is important that contagion should be prevented and the spread of epidemics be avoided. This duty, furthermore, the professional man performs without remuneration, considering that it is something which he as a citizen owes to the commonwealth. Boards of health in recent times have, in every possible way, endeavored to devise means for making the matter of reports as little a tax as possible on the time of the busy practitioner. Neither the law, however, nor the dictum of any board of health justifies its employes figuring in the role of either attending physician or consultant. The strict limitation of the duties of the inspector is to certify that there exists a case of contagious disease in the household whence the report emanated, and this is all. If he should find that the diagnosis was an erroneous one, it is not within his province to so state to the family or the patient, thus inevitably casting disrepute on the diagnostic ability of his professional brother. Inspectors from the board of health can neither figure as attending nor as consulting physicians unless so requested to act by the physician in charge. In the event of the meddlesomeness of an inspector leading to serious complication the *Bulletin* questions if the board of health, since in the eye of the law it is held responsible for the acts of its agents, does not lay itself open to suit for damages. All this is apropos of alleged flagrant instances of meddlesomeness and officiousness on the part of employes of the New York Health Department. But are there not others, and nearer the publication office of the JOURNAL than New York? There is ground for answer in the affirmation and this outspoken rebuke should be heeded by these also.

Repression of Bovine Tuberculosis in Connecticut.—The *Yale Medical Journal*, March, has the following editorial estimate of the value of the anti-tuberculosis legislation of 1895, in Connecticut:

"A law was enacted by the legislature of this State about one year ago, the aim of which was to eradicate bovine tuberculosis. Prior to the enactment of this law there was much

discussion upon it and strong efforts were made by the agricultural portion of the State to secure its defeat. The law provides for the appointment of three commissioners whose duty it is to inspect the cattle of the State for tuberculosis, using tuberculin as a diagnostic agent when so permitted by the owners of cattle, and to destroy all animals found affected with the disease. The law has now been in operation about twelve months and it has been found that quite a large per cent. of cattle are affected with tuberculosis. As it has been repeatedly proven that bovine tuberculosis is directly transmissible to man from meat, milk, or other ways, the importance of carrying out the above law becomes apparent to the general public and especially to the medical profession. The law can work no real hardship to the owners of cattle as it provides that the commissioners shall assess all animals at their market value before the tuberculin test is made. We hope that the law may be allowed to remain upon the statute books and so enforced that in the years to come a case of tuberculosis among the cattle in this State will be hard to find. As the principal source of the transmission of the tubercle bacilli from animals to man is through milk, the importance of the recent suggestion that a sanitary milk laboratory be established in every city, can not be overestimated. This plan is not entirely new, having been in operation for a considerable time in some of the larger cities of the country and meeting with very notable success in Boston, Mass. The object of an institution of this kind is, first, to provide pure, wholesome milk for general consumption; second, to provide pure milk, scientifically modified according to the directions of a physician to meet the needs of any particular case. Such establishments would be a great benefit to a large proportion of the population of this State, or any other which might adopt this system, and the danger of the transmission of the tubercle bacilli through milk would be reduced to a minimum. Although the danger of the disease being transmitted from animals to man is considerable, we know that the greatest danger is from the dried sputa of tuberculous patients and we would urge physicians to appeal to the better natures of their patients and warn them of the evils which may result from promiscuous expectoration."

Typhoid Fever in Indiana.—On account of the high rate of mortality from typhoid fever the State Board of Health of Indiana has issued a circular order to health authorities, attending physicians and heads of families relative to its prevention and suppression. The order went into effect May 1. It states the total number of cases during the past year in the state as 8,100, number of deaths 2,400. After reciting the methods by which typhoid fever is propagated it defines the duties of the physicians as follows:

1. Promptly report the case to the city or county health officer. This is a *moral, social* and *legal duty*. The county officer will report to this Board, and then analysis of water and other sanitary work can be undertaken.

2. If possible, have the patient placed in a room apart from the rest of the family, preferably on the top floor, and nursed as far as possible by one or two persons. Sometimes nurses make bread or prepare other food, with hands contaminated by caring for the patient. This leads to other cases in the family.

3. The dishes, knives, forks, spoons, underclothing and other articles used by the patient, should not be used by any one else, and should not be removed from the room until they have been disinfected. This is done by placing them for an hour in a solution of carbolic acid (six ounces of the acid to one gallon of water) and then boiling them in water.

4. The manner of disposing of the discharges from the bowels is of the *utmost importance*. In the vessel receiving the discharge there should be a quantity of chlorid of lime, and after the discharge is received it should be covered by at least a pint of solution of chlorid of lime in the proportion of six ounces to a gallon of water. It should be allowed to stand for an hour, and be thoroughly mixed before emptying into the closet.

5. The hands of those caring for the sick, and the portions of the patient's body which have become soiled with discharges should be frequently disinfected with a carbolized solution. The carbolic solution above described can be diluted one-half for the purpose.

THE DUTY OF HEALTH OFFICERS.

1. Every case of typhoid fever must be reported by the physician to the county health officer. Any physician failing in this duty to himself and humanity will be presented.

2. Upon receipt of report of a case of typhoid the county health officer shall, without delay, in *conjunction with the attending physician*, visit the patient and make a thorough investigation. A sanitary survey shall be made of the premises according to the "Sanitary Survey Blank for Typhoid," and said blank, when filled, shall be filed to make a record. Every effort must be made to discover the source of the disease. The incubation period of typhoid may be seven days, average is twelve to fourteen days; greatest, twenty-three days.

Ninety-five per cent. of all cases of typhoid proceed from drinking water. Therefore, a close investigation must be made of every well from which the patient may have drunk for seven to twenty days preceding the attack. If, in the judgment of the Health Officer, analysis is required, send a copy of the Sanitary Survey to this office and ask that *Instructions A* be returned to you. This circular gives detail instructions for the collection of samples of water for bacteriologic and chemic analysis. The work will be done without cost, but will only be done when absolutely needed, and when every requirement of this office has been fulfilled. By order of the State Board of Health. D. C. RAMSEY, M.D., President.

J. N. HURTY, M.D., Secretary.

Health Reports.—The following health reports have been received in the office of the Supervising Surgeon-General Marine-Hospital Service:

SMALLPOX—UNITED STATES.

Alabama: Mobile County, May 11, 2 cases.
Florida: Pensacola, May 2 to 9, 2 cases.
Louisiana: New Orleans, April 20 to May 7, 29 cases, 7 deaths.
Michigan: Ionia, May 2 to 9, smallpox reported.
Tennessee: Memphis, May 9 to 16, 2 cases.

SMALLPOX—FOREIGN.

Bristol, April 25 to May 2, 3 cases.
Cairo, April 9 to 15, 1 death.
Callao, March 29 to April 12, 10 deaths.
Cienfuegos, May 3 to 10, 17 deaths.
Copenhagen, April 11 to 18, 2 cases.
Genoa, April 25 to May 2, 2 cases.
Guayaquil, April 17 to 24, 4 deaths.
Licata, April 18 to 25, 1 case.
London, April 25 to May 8, 5 deaths.
Madrid, April 21 to 28, 11 deaths.
Manchester, April 25 to May 2, 1 case.
Moscow, April 18 to 25, 1 death.
Odessa, April 18 to 25, 22 cases, 4 deaths.
Prague, April 18 to 25, 4 cases.
Rio de Janeiro, April 8 to 15, 8 cases.
St. Petersburg, April 18 to 25, 26 cases, 11 deaths.
Swansea, April 25 to May 2, 2 cases.
Trieste, April 11 to 18, 3 cases.
Tuxpan, April 19 to 26, 7 deaths.
Warsaw, April 11 to 18, 1 death.

CHOLERA.

Alexandria, April 8 to 15, 15 deaths; Dec. 29, 1895, to April 26, 1896, 130 cases, 115 deaths.
Shimane Ken, Japan, April 19, 1 case.

YELLOW FEVER.

Rio de Janeiro, April 11 to 18, 122 cases, 98 deaths.
Cuba: Santiago, April 25 to May 9, 5 deaths; Havana, May 1 to 7, 13 cases, 6 deaths.

NECROLOGY.

DR. JOHN STEWART, formerly of Tai-ho, China, and latterly of Glasgow, Scotland, died at the latter city, after undergoing an operation for the relief of hepatic abscess, being then in his 37th year. During ten years of his life he had been one of the most laborious of medical missionaries of northen China, where he had conducted a free dispensary which was often crowded from seven in the morning until far along in the day, and where thousands of patients passed through his hands every year. Dr. Stewart began his medical studies at Marshall College, Aberdeen. He came to America and soon obtained a post in a large manufactory in Philadelphia that required him to be on duty every night. For three or four years he occupied this position, attending Pennsylvania University during the day, where, at the end of that period, he gained his M.D. Returning to England, he applied to the C. I. M., and pending acceptance, attended special classes in the London hospitals. He

went to China in 1885, and 1888 came to the city of Kwei-hwa-cheng in the far north, and labored there for the past seven years.

HERMAN LOEWENTHAL, M.D., of New York City, who died April 21 at the private hospital of his friend Dr. Lange, was a graduate of the University of Berlin in 1860. He was born in Berlin sixty years ago. He had served as a surgeon in the Prussian army until 1863, when he came to this country and entered the United States service as assistant surgeon, being subsequently promoted surgeon with the rank of major. After serving in the hospital at City Point he was transferred to the General Hospital at Annapolis, where he remained until the close of the war, when he retired from the service and established himself in private practice in New York, where he was widely known as a specialist in the diseases of women. President Cleveland appointed him an examining physician in the Pension Bureau. Dr. Loewenthal was a prominent Mason and a member of the G. A. R. He leaves a widow and six children.

WILLIAM SHARP, M.D., of Rugby.—The *Medical Press and Circular* has the following obituary note regarding Dr. Sharp: "The death of Dr. William Sharp, of Rugby, who has just died in his ninety-first year at Llandudno, has reminded the world of the youthfulness of the natural science curriculum. Dr. Sharp settled originally in Bradford, where he succeeded his father and became senior physician to the Infirmary in 1837. He afterward removed to Rugby, and persuaded Dr. Tait to introduce natural science into the Rugby teaching. This was eventually done, on condition that Dr. Sharp would become the first teacher, under the title of 'Reader in Natural Philosophy.' Dr. Sharp came of a north country stock which had been famous for its scientific attainments, and Dr. Sharp himself was made Fellow of the Royal Society in 1840. His Degree of Medicine was that of Lambeth, formerly in the episcopal gift, but now in abeyance. With regard to the public school science appointment, the late Tom Hughes observed, 'If Tait had done nothing else at Rugby than appointing Sharp, not without difficulty, as Reader in Natural Philosophy, he would have deserved the gratitude of every Rugby man.'"

J. WEST ROOSEVELT, M.D.—The following tribute to the memory of Dr. Roosevelt has been feelingly voted by the directors of the New York Physicians' Mutual Aid Association:

"The directors of this association have heard with deep regret of the death of Dr. J. West Roosevelt, an honored member of the association. His learning, his probity and his manliness were qualities which endeared him to all with whom he came into association.

"They acknowledge with deep appreciation his generosity and kindness in bequeathing to the association the amount of his claim, $1,000, as an addition to the permanent fund of the association, and feel that in no surer way could a benefaction be made, for all time, a blessing to the needy members of his profession in this State.

"It was ordered that the name of Dr. J. West Roosevelt be placed on the list of benefactors of the association, and that notice of this action be sent to the medical journals."

ISAIAH F. PRAY, M.D., of New York City, died April 23, aged 50 years. He was a native of Maine, an arts graduate at Dartmouth College, and an M.D. at the New York University in 1870 and 1874 respectively. He was a member of the Pathological and County Medical Societies. A widow survives him.

JACOB RAU, M.D., died suddenly at his home, No. 284 Ferry street, Newark, N. J., on May 7, aged 73 years, of paralysis. He was born in Würtemberg, 1824. He was a surgeon in the Würtemberg army in 1849, when the latter was sent to Baden to quell the revolution there. He again saw field service in 1866, in the war with Prussia. In 1880 he came to the United States and made his home permanently in Newark.

JAMES B. HARRIS, M.D., of Sag Harbor, N. Y., died April 17, of pneumonia. He was 36 years old, and a graduate of the New York College of Physicians and Surgeons, a member of the class of 1882.

J. G. WILLIAMS, M.D., at Braddyville, Iowa, May 2, aged 66.——M. C. Heath, M.D. (Med. College of Fort Wayne, Ind., 1883), of pulmonary tuberculosis, at Cadillac, Mich., May 2, aged 38.——Frederick Dunning, M.D. (Jefferson Med. College, Philadelphia, 1892), at Easton, Md., May 9.

BOOK NOTICES.

Dame Fortune Smiled. The Doctor's Story. By WILLIS BARNES. Pp. 335. Boston: Arena Publishing Company, 1896. Chicago: A. C. McClurg & Co.

This is a very readable novelette, in which a well educated young German physician, while in Paris completing his studies, becomes acquainted with some wealthy Americans who induce him to settle in New York. They make his fortune and he cures them of nervous prostration by hypnotic suggestion. He marries a bright and well educated newspaper correspondent, and his charming clients build him a sanitarium and strive to outdo each other in making charitable largesses. This is an excellent study for your wealthy patients.

General Index to the Journal of the American Medical Association. Vols. I to XXIV. By WM. B. ATKINSON, M.D. 8vo, cl., pp. 360. Chicago: AMERICAN MEDICAL ASSOCIATION Press, 1896. Price $1.25.

This index will be found very useful to all medical men. In case they do not have the bound volumes of our JOURNAL, the index will tell them what has appeared in its pages, and there are few places in the United States where some one has not preserved his JOURNAL. Libraries will find this index indispensable; it includes the names of author and subject, and is printed in clear type on excellent paper.

Gentlemen noticing errors or omissions in it are asked to kindly send the correction to the editor of the JOURNAL.

Some Prolegomena to a Philosophy of Medicine. By GILES F. GOLDSBOROUGH, M.D., President of the British Homeopathic Society, etc. London: John Bale & Sons. 1896. Cl., pp. 66.

This is an attempt on the part of an English "homeopathic" practitioner to lay the foundation of a philosophy of medicine which may be considered as a sort of composite photograph of all systems which now exist. We can see no very good reason why the title could not have been condensed from "Some Prolegomena" to the simpler and more familiar word "Introductory," which means essentially the same thing. There are several new terms introduced. Not only is there little to find fault with, but much to be commended. The book is handsome in appearance.

MISCELLANY.

Queer Place to Have Them.—A chiropodist announces on his cards that he has had the honor of removing corns from several of the crowned heads of Europe.—*Printer's Ink.*

An Octogenarian.—Dr. Alonzo Garcelon, the President of the Board of Trustees, celebrated his eighty-third birthday at the recent meeting at Atlanta, on which occasion he was the recipient of the hearty congratulations of his colleagues in the ASSOCIATION.

Bequests to New York Charitable Institutions.—Under the will of the late Leonard Friedman the Mt. Sinai Hospital gets a bequest of $2,500, the Montefiore Home for Chronic Invalids $1,500, and other Asylums and Homes about $7,000 in different sums.

Rare Quadruplets.—It has been estimated that a case of quadruplets occurs but once in 350,000 to 400,000 births. But if the proportion were one in a million, or even a billion, there

would always be two persons who would regard the prodigality of nature as an act of unkindness.—*Medical Press.*

He Affirmed the Negative.—"Well, doctor, is there any thing the matter with my foot?" asked Jones. "My answer," replied the doctor, "is in the negative." He had taken up the new photography.—*Pick-Me-Up.*

"Idiotic" Acid.—"What acid do we get from iodin?" asked the medical professor. "We get a—an—usually get idiotic acid," yawned the student. "Have you been taking some?" quietly asked the professor.—*Medical News.*

Life's Problem Given Up.—"After all," asked a disciple of Diogenes, the great thinker, "what is life?" "That, sir," he replied, "is a riddle which, in the end, is given up by every body."

She Had Rather Be an Aquarium.—Fashionable Doctor: "My dear young lady, you are drinking unfiltered water which swarms with animal organisms. You should have it boiled; that will kill them." His patient: "Well, doctor, I think I'd sooner be an aquarium than a cemetery."—*Harpers Weekly.*

A New Bacillus in Milk.—Obermuller writes to the *Hygienische Rundschau*, No. 19, 1895, that he has been inoculating guinea pigs with ordinary milk from a supposed well-appointed establishment. Several of the animals died with typical tuberculosis and the rest gave evidence of a peculiar infection, produced by a special bacillus, hitherto unknown, which he will soon more fully describe. In another series of experiments 38 per cent. showed tuberculous infection and 30 per cent. wasted away.

Druggist Suffers for Illegibillity of Handwriting on Prescription.—A Paris druggist has just been fined 500 francs for compounding a prescription, the signature of which had been purposely rendered illegible, as it did not proceed from a physician. The regulations are that the druggist must insist upon the signature of a physician to each prescription, and verify the existence of local physicians by consulting the directory if necessary.—*Journal de Médecine de Paris*, March 15.

California Female Insane to Have Attendant.—Section 2218 of the Political Code of California, relating to the commitment of insane persons, which provided that the insane person, together with the order of the judge and certificate of the physicians, must be delivered to the sheriff of the county, and by him must be delivered to the officer in charge of the insane asylum, was amended in 1895, by adding, "but no female insane person shall be taken to the asylum without the attendance of some other female, or some relation of such insane person."

Endemic Ulcers.—Juliano, of Bahia, Brazil, is studying the endemic ulcers known variously as the Biskra button, Burmah boil, Cochin-China ulcer, Alibert's endemic prophlyctitis, Larrey's ulcerous dermatosis, Sahara chancre and by other local names. He prefers to call it the endemic button of the tropics, and believes that it is caused by some microörganism, which he is now trying to discover. He finds it most frequently on the face or extremities, which shows that it is usually communicated by the bite of some insect. He has a careful study of it in the *Journal des Maladies Cut. et Syph.*, October, 1895.

Tarnier's Treatment of Postpartum Hemorrhages, described at the Congress of the Obstetrical Society of France, last month, is merely a tampon, if the hemorrhage proceeds from the neck of the womb, the vagina or the vulva. The important point is to locate the source. If it proceeds from the body of the uterus, it is a serious matter then, and he applies heat in the form of hot water, but first he clears out of the uterus every trace of clot, in spite of all protests, sometimes having to clear it two or three times. If there is the slightest fragment of a clot left, the uterus is liable not to contract. Tarnier advises the use of hot water as a preventive measure when there is a known individual or family tendency to hemorrhages or uterine inertia. He has never lost a patient from a postpartum hemorrhage, and he gives no drugs except in very rare cases he follows the hot water with a hypodermic injection of ergotinin.—*Progrès Médical*, April 18.

Anecdote Regarding the Late Dr. E. R. Palmer, of Louisville University.—He had a fund of wit, and often rose to eloquence, but his lectures were nevertheless always serious efforts to impart truth. The spontaneity of his wit was wonderful. "Mr. Smith," said he one day in the quiz, "what is the chief proximate principle of the fifth class?" Smith, a bashful youth from the country, blushed and hesitated, and began to scratch his ear. "You have it," shouted the professor in a merry voice, "your finger is on it; it's your ear" (urea).

Essential Paroxysmal Tachycardia Treated with Artificial Serum.—The *Bulletin Médical* of April 22, describes a severe case treated in vain with all the usual remedies, at the fifth day in acute asystole, in imminent danger of death. To retard the cardiac pulsations and increase the arterial tension, Chauffard resorted at last to an intravenous injection of artificial serum. One hour later the patient was breathing freely, with no further distress, and felt "infinitely better." By the next day he was completely restored. Chauffard accepts the results in this one case as offering very favorable indications for the continued use of this "medication with a future," in the severest cases of this disease when the cardiac paralysis and syncope become menacing.

Experiments in the Contagiousness of Pulmonary Phthisis.—It has been asserted that persons sent to resorts for their general health, acquire there the germs of tuberculosis. Some recent experiments described in the *Revue de la Tuberculose*, December, 1895, prove that where the sputa of consumptives, even in advanced stages, is carefully collected and destroyed, there is no contagion. Apartments where deaths from purulent phthisis had occurred were disinfected and animals inoculated with the dust collected from the walls, etc., afterward. Results showed that cleanliness and disinfection are enough to prevent any contagion from inhalation of the dust. Further experiments with animals proved that the most infective forms of phthisis did not communicate contagion where the patients constantly used portable cuspidors in which there was a layer of Van Swieten's solution. There is therefore less danger of contagion at a sanitarium or consumptive resort, where strict measures prevail, than in the every day life of any large town.

The Genuine Prophylaxis of Hydrophobia.—The London papers report that a great activity in enforcing the muzzling ordinance against dogs has taken place. Out of 11,000 dogs lately taken up by the catchers from all parts of London, 9,450 have been destroyed, and the new crematorium at Battersea has been kept in use all day and a great part of every night, in order to deal with the exceptionally large number of bodies that have had to be destroyed. It it estimated that about one hundred and fifty dogs have been suffocated in the lethal chamber every day, and about an equal number have been cremated daily. A total number of 638 animals have been claimed by their owners. Quite two-thirds of the dogs that have been received were fox terriers, and there have only been a very few dogs of really good breed. The daily number of animals that are being taken in is gradually decreasing. This is a sure method of reducing the material susceptible to rabies, and of indirectly stamping out hydrophobia. It may confidently be predicted that the mortality by that disease in 1896 will show a marked reduction.

Abnormal Urethras.—Wölfler treated recently a young girl who had besides the normal micturitions, a continuous slight flow of urine. Examination disclosed a second urethral opening between the first and the vagina. He assumed that there was a double bladder and united the two parts with a com-

pressor similar to Dupuytren's enterotome. He also intended to obliterate the second urethral mouth, but was prevented by a laceration between this canal and the urethra proper, when he performed Gersuny's operation of twisting the urethra, after which there was no further incontinence. Schwarz criticises this treatment in the *Beiträge z. Klin. Chir.*, No. 15, adding the results of observations in about a hundred cases of abnormal urethras, debouching into the urethra proper, the vagina, vulva, or rectum. He asserts that a communication must first be established between the abnormal urethra and the bladder, and then the abnormal outlet obliterated. Such malformations often escape notice in men and do not require surgical intervention, which is necessary in female cases usually. When the abnormal urethra debouches into the cul-de-sac it is a serious matter. Every case of this kind in his experience has proved fatal in time.

Four Years' Course.—The Medical Department of the University of Buffalo announces that it has adopted a four years' course, beginning with the session of 1896-97.

Location of Private Asylums in Connecticut.—No asylum, home, or institution for defective, deformed or incurable persons, it was enacted in Connecticut in 1895, shall be established or maintained within the corporate limits of any town without the consent of said town, unless under express legislative authority.

The Intercolonial Medical Congress.—Preparations have been made for the meeting of the Intercolonial Medical Congress at Dunedin, New Zealand, in February next. From Australia, steamers have been arranged to leave all the chief ports in time for the opening of the Congress. The attractive program of the "trips" available for those who attend the Congress has probably influenced a good many of the members of the profession in Australia to make their journey to Dunedin.

Night Medical Service in New York City.—This service, established largely through the efforts of Dr. Henry Nachtel, has been discontinued after having been in operation about fifteen years. Its object has been to afford free medical relief, between 11 P.M. and sunrise, for the needy sick. The physician attending the call is paid $3 per visit by the city. The discontinuance of this service, done by reason of alleged abuse of the charity, is due to the withholding of an appropriation of $1,500 per annum by the Board of Estimate, and it is now alleged that a hardship is wrought in the case of many poor persons whose cases are not suitable for hospital treatment. The friends of the service have claimed that it is mandatory upon the financial officers of the city to appropriate the amount named.

Ameba Enteritis.—This is Boas' name for a certain form of intestinal catarrh, and he is making a study of it and the microörganisms which produce it. The symptoms are excessive debility, diarrhea and vomiting. The disease lasts about six weeks, when the patient entirely recovers, as the ameba disappears from the stools (Quincke's ameba coli mitis). Animals injected with it did not respond in any way. Boas may have different results from the pure cultures he has succeeded in making now, from the fourth and last case ever observed in Berlin.—*Dtsch. Med. Wochsch.*, April 16.

The Enzyme of Schizo-saccharomyces octosporus and Saccharomyces Marxianus.—These two yeast plants produce a diametrically opposite effect upon cane sugar and maltose. The first inverts maltose while it leaves cane sugar untouched, from which we can expect that it will not form invertin, but rather glucose. The second on the other hand, inverts cane sugar and not maltose. It was also found that alpha-methyl-glucosid was induced by the first and not by the second. The experiments were made with a diluted extract of each by Fischer and Lindner, who describe them at length in the *Ber. d. Dtsch. Chem. Ges.*, xxviii, p. 984.—*Centralbl. f. Phys.*, April 4.

Qualification for Giving Opinion as to Poisoning.—The question was raised in the Michigan case of People v. Thacker, as to whether a practicing physician, who has read the books and had the benefit of instructors until his mind is so well trained that he is able to take his degree as an M.D., and who is authorized by the law to practice medicine, and to prescribe remedies for persons who have been poisoned, either by accident or design, may express his opinion as to whether a given case is one of poisoning or not, or whether, in addition to the above qualifications, he must have actual experience in poisoning cases before he can testify. The authorities on the subject are conflicting. The supreme court of Michigan holds, March 24, 1896, that such an one is qualified, without the additional experience, to give his opinion as an expert. It thinks that if the witness has given the subject of poisons such careful and discriminating study, by reading the literature of the subject and listening to the lectures of instructors who have made a specialty of the subject, so that his study has resulted in the formation of a definite opinion, that he may express it, and that, when expressed, it may be considered by the jury, which should give the opinion so expressed just such weight as, in view of all the testimony, they think it entitled to. The medical witness whose testimony it specifically holds there was, for the above reasons, no error in admitting, graduated in March, 1894.

Influence of Salt on Chemic Changes.—Bial states that salt, up to a certain amount, has a most stimulating effect upon the growth of the yeast plant; after this point is passed, it ceases to have any effect, while if still more salt is added, it checks and destroys the plant. In administering salt, therefore, to check the gastric fermentation, it is very important to experiment carefully until the exact amount of salt required is determined, as different quantities produce opposite results. Ewald has secured excellent results with salt direct in such cases. Scheurlen has arrived at a similar conclusion by a different path, showing that the disinfecting power of carbolic acid can be very much increased by adding salt; even the most rebellious anthrax spores are destroyed by the combination. Gans also announces that carbonate and bicarbonate of soda retard notably the transformation of glycogen, in his experiments with a mixture of glycogen and diastase, while chlorid of sodium and Glauber's salt have no effect either way. This result confirms our ideas in regard to the action of alkalines in diabetes. *Dtsch. Med. Wochsch.*, April 16, and *Sem. Méd.*, April 22.

Free Bacteriologic Diagnosis of Diphtheria in London.—If we mistake not, the first civic division of London to adopt an independent laboratory for the modern diagnosis of diphtheria is that of St. Marylebone, under the direction of Dr. Wynter Blyth. The *Medical Press* says: "The experiment now being carried out in Marylebone of furnishing apparatus and opportunity for free bacteriologic examination in doubtful diphtheria will be watched with much interest by all who are interested in public health progress. Its results during the quarter have been as follows: Twenty-one cases of presumed diphtheria have been examined, and of these eleven, or rather more than half, showed the typical microphyte. The actual number of cases of diphtheria notified during the period in question was seventy-five, of which number forty-one were removed to a hospital. These figures show a marked increase over the corresponding period of 1894, when sixty-seven cases were officially reported. In view of the alarming spread of this fatal but quite preventable disease, Dr. Wynter Blyth is to be congratulated on his action in affording medical men in his district an opportunity at arriving at an absolute and early diagnosis in doubtful cases of sore throat."

Doctors' Right of Way.—Over eight hundred physicians of Chicago have already taken advantage of an ordinance passed by the Council, giving them the right of way on the streets and over bridges ahead of processions, parades, fire lines and

other obstructions that usually stop their ordinary traffic. Each of the physicians applying has been furnished with a badge and a special permit, which entitle him to the privileges of the ordinance and demonstrate his authority. The badge is a very pretty affair, about the size of a quarter, made of German silver in the form of a circle 3-16 of an inch wide, around a red cross in the center. The cross is of red enamel and the circle white. The ordinance also applies to ambulances, and is made to include all physicians driving in answer to professional calls, to fires or accidents. It is designed to afford relief as quickly as possible to people who require the services of a physician. The permits are signed by the Mayor and City Clerk, and the badges are issued from the City Clerk's office on the payment of a 50-cent fee.

Hippocrates on Waters.—Whoever wishes to investigate medicine properly should proceed thus: . . . We must also consider the qualities of the waters, for as they differ from one another in taste and weight, so also do they differ much in their qualities. Concerning the waters which the inhabitants use, whether they be marshy and soft, or hard and running from elevated and rocky situations, and then if salty and unfit for cooking; and the ground whether it be naked and deficient in water, or wooded and well watered, and whether it lies in a hollow confined situation, or is elevated and cold; and the mode in which the inhabitants live and what are their pursuits; whether they are fond of drinking and eating to excess and given to indolence, or are fond of exercise and labor and are not given to excess in eating and drinking. From these things he must proceed to investigate everything else. For if one knows all these things well, or at least the greater part of them, he can not miss knowing when he comes to a strange city, either the diseases peculiar to the place, or the particular nature of common diseases, so that he will not be in doubt as to the treatment of the diseases or commit mistakes.—HIPPOCRATES on "*Airs, Waters and Places.*"

A Clergyman's Good Word for the Medical Profession.—The Rev. Dr. Talmage says, "Bless the doctors," and contends that there is too much fault-finding among the general public with physicians, especially when the patient fails to recover.

So far as I know them, physicians profess to be neither omnipotent nor all-wise. Like those of us in other professions and occupations, I suppose they sometimes make mistakes; but the time we spend in sarcastic flings at their Christ-like and magnificent calling we had better spend in thanksgiving to God for what they accomplish. Better not be too hard on the doctors. Sooner than you expect you will be sending for them, and between you and the King of Terrors there will be nothing but one of their prescriptions. They stand to-day, as a profession, fighting back whole armies of cancers, pneumonias, diphtherias, and congestions of brain and liver and lung. They do more missionary work than any class of men in the country, and upon them will come the blessing of the Great Physician, as he says, "I was sick, and ye visited me." When the last ailment of body is cured, and the last attack on the children's cradle has been discomfited, and the last broken bone of workman fallen from the house scaffolding shall be set, and the last swollen gum of teething child shall have been lanced, and the last pale patient with tumor successfully removed shall, with a grateful "Thank you, doctor," be released from the operating table in the clinical department of the city hospital, then it will be time enough to deride the medical profession. Christ took along with him in his journeying a physician, one Doctor Luke, and while some in that calling are sceptical and atheistic, many of them know how at the same time to medicate body and soul.

An American Citizen and Physician Wounded in Cuba.—Dr. Jose Manuel Delgado, who has been a storm center of considerable international correspondence, is a graduate of Bellevue Hospital Medical College of the class of 1872. A dispatch from Washington gives the following recent information regarding the progress of the case. In addition to the removal of the commanding officer who led in the outrage and wounding of the American citizen, Dr. Delgado, steps will be taken to press a claim for money damages. Consul General Williams has submitted a great deal of information to the State Department, including sworn statements from both Dr. Delgado and his father, Joaquin Delgado, as to their citizenship, with descriptions as to the occurrences of March 4. Perhaps the most important evidence is that which shows that Captain General Weyler, when he received a protest from Consul General Williams, promptly stopped the proceedings which were in progress on the Dolores plantation, and had Dr. Delgado, who had been cut and shot, removed to a safe place, where he was given the best medical attention. Dr. Delgado fortunately recovered from his wounds, but is still in Cuba looking out for his plantation. No suggestion has reached the department as to the amount Dr. Delgado will claim for the injuries sustained by himself and men, as well as for the damage done his estates. Mrs. Mussey has not yet heard from Delgado on this point, and until she does she will take no action looking to the filing of his claim. When Dr. Delgado's claim is submitted the department will have two claims to press from this family. Mr. Delgado, the father, had his estates embargoed by the Spanish in 1869, and the Claims Commission which assembled a few years later awarded him damages to the extent of $117,000. The matter has been close to settlement several times, but payment has never been made.

The Trendelenburg Position in Prolapse of the Funis.—The London *Lancet* has the following comment and commendation regarding that recent contribution of Dr. R. Abrahams to the *American Journal of Obstetrics* on this subject. "He relates a case in which his attention was accidentally called to the value of this position in the treatment of prolapse of the cord. It was a case in which the vertex presented. On rupturing the membranes a very large quantity of liquor amnii escaped, and a portion of the umbilical cord, estimated to be ten inches in length, was carried down by the gush of the waters into the vagina. The os was fully dilated, and the best plan seemed to him to be to deliver the woman either by forceps or version as quickly as possible. The patient's surroundings were of the poorest possible description, and the bed on which she was lying was 'a wide long board with four poles as feet to rest on.' While he was trying to get the patient in position for operating the foot of the bed gave way. This necessitated the raising and holding up of the foot of the bed some six feet from the ground while the supports of the bed were being repaired. On lowering the bed after this had been at last accomplished he examined the patient, and was surprised to find that no part of the cord was to be felt in the vagina and that the head was fully engaged. Delivery was effected quite naturally without any assistance. Dr. Abrahams ascribed the change in the condition of things to the extreme Trendelenburg position caused by raising the foot of the bed to the height above mentioned; and this appears most probably to be the true explanation of the sudden recession of the cord. He considered the Trendelenburg position much superior to the genupectoral position formerly recommended for these cases, as being more comfortable for the patient, but, on the other hand it has the disadvantage of causing difficulty in breathing. Still, as the position may only have to be maintained for a short time, as in Dr. Abraham's case, treatment of prolapse of the funis by the Trendelenburg position seems to deserve a trial."

The Lebel Sword Bayonet of the French Army.—The *Courier des Etats Unis*, in a communication dated April 22, 1896, has the following concerning wounds by the Lebel bayonet. Since the adoption of small caliber firearms there has been little opportunity in Europe at least, of observing wounds caused by the sword bayonets or poniards associated with the rifles. For a long time it was considered that these wounds ought to be more deadly than those occasioned by the old style saber bayonets;

but recent observations have modified completely this opinion and proved that the lesions produced by narrow bladed weapons heal readily notwithstanding probable intestinal perforations, and without the necessity of resorting to laparotomy. It is admitted now that the thrust of sword bayonets or poniards being at the moment of penetration much more feeble than that of a rifle bullet the triangular or quadrangular blades may push aside the intestine or even push it before them without perforating it; and even should they perforate, that the wound would close spontaneously and quickly. Several observations on accidental injuries give every reason to believe this; the last made by Surgeon-major Guichmerre on a soldier of the reserves, who on Oct. 17, 1895, was pierced by a sword bayonet, model 1886, in an assault during a sham fight and grievously wounded in the abdomen. No surgical interference was undertaken in this case and on October 20 the patient was much improved; on the 21st he was able to eat an egg and on the 30th he was discharged from hospital cured. It is to be noted in this connection that foreign powers have generally adopted poniards with a blade 25 to 30 centimeters long, while that of the Lebel sword bayonet is 518 millimeters.

Presumption as to Continuation of Sanity.—Every man is presumed to be sane. This presumption of sanity, the supreme court of Mississippi holds, in the case of Ford v. State, decided March 30, 1896, will be sufficient to sustain the burden resting on the State of proof of sanity on the part of the defendant at the time of the commission of the act charged if the defendant offers no testimony sufficient to raise, out of the evidence in the case, a reasonable doubt of the defendant's sanity at the time he committed the act. Where general, habitual insanity is shown to exist, it is presumed to continue, and the burden of showing that the act was committed in a lucid interval is upon the State, and in the sense that that burden is not satisfied by any presumption of sanity, but must be satisfied by proof on the part of the State of the lucid interval at the time of the doing of the act. But if only temporary or recurrent insanity, as from paralysis or epilepsy, be shown, there is no presumption therefrom of continued, general, habitual insanity. And when all that the evidence in the case shows is this latter form, temporary insanity, without raising a reasonable doubt as to whether it existed at the time of the act in question, the State may rely on the presumption of general sanity with which it started out, without offering proof as to the lucid interval; for the presumption of sanity with which the defendant is invested at the outset is a general and universal one, embracing, as a whole all its parts, the included presumption of sanity at all times, including the particular time when the act in question was committed, unless the evidence raises a reasonable doubt, not of temporary, but of general insanity, and hence of insanity at the particular time.

A Physician Exercises the Priestly Office.—A poor New York lad, named Kyle, started away from home to seek his fortune, with some of his comrades, and began by trying to steal a ride on a freight train. The engine had hardly gained good speed before Kyle was jolted from the trucks to the rails. The wheels of the caboose passed over his legs and cut both off below the knee. His companions saw his plight and jumped off to go to his assistance. They managed to bind up the wounds with their handkerchiefs and the lining of one of their coats. Then they carried Kyle to the banks of the Hudson, near by, and made a bed for him on the grass. The station agent at Spuyten Duyvil had seen the accident and ran to the spot. When they saw him coming Kyle's companions ran away. The station agent summoned Policeman Shea, who called an ambulance from Fordham Hospital. As soon as the policeman had left, Kyle took a string of beads and the prayer book from his pocket. He went over the beads carefully and placed the cross upon his breast. Then he opened the prayer book and in a faint voice began to read. A crowd gathered about the boy, anxious to relieve his sufferings. He thanked them and said he knew he was going to die. "But God bless you all," he continued, "I'll read a prayer for your salvation." Every head was bowed as the Latin words came in faint tones from the dying lad. Then the ambulance came and Kyle was placed inside by Dr. Riley. The boy became faint, his eyesight began to fail him. "I can't see to read," said he to Dr. Riley. "Won't you read me some prayers?" The Doctor took the book from the boy's hand and read to him till the hospital was reached. Then he was placed in bed, but he would relinquish neither the prayer book nor the beads. The poor lad shortly afterward became unconscious and death took place about midnight.

The Duty of the General Practitioner Toward the Feeble-Minded.—The editor of *Archives of Pediatrics* calls attention to the question of the responsibility of the family physician when he finds feeble-minded children in the families he attends. The relation is one that deserves his thoughtful attention, for he can assist these little unfortunates, not only as an adviser regarding their mental and moral training, but also in his capacity of physician. Feebleness of body frequently attends and increases feebleness of mind. There is a general sluggishness of the whole physical being, involving especially the organs of sense. This is not so much due to lack of mechanical perfection as to non-perception at the brain centers. The mind, therefore, lacks the constant spur to activity which that of the normal child receives. The child is to a great degree deprived of the knowledge commonly gained through the medium of the five senses. "The circulation of these children is slow and imperfect. They are therefore especially sensitive to cold and should be clothed more warmly than ordinary children. They eat slowly and generally digest the food well, but are subject to constipation. The diseases to which feeble-minded children are liable are asthenic in character. Phthisis, catarrhal pneumonia, bronchitis, ulcers and all forms of disease engendered by weak circulation and low vitality are common among them. If attention to hygiene is essential in normal children, it is doubly important in the case of the mentally feeble, in order that no unnecessary burden may be imposed upon those who are already so heavily handicapped. There is no special or specific treatment for most cases. Massage, by stimulating the circulation, sometimes proves of considerable assistance. Craniectomy will perhaps benefit a few cases of microcephaly, but their number is extremely small; its most successful application in the vast majority of cases is in its non-performance." Thyroid treatment of the cretinoid type has proved successful in many well-authenticated cases, and is established as a safe and legitimate method of treatment. It should be a recognized fact that the treatment must be continued as long as the child lives, if he is to remain healthy. In other types the medical treatment should consist in maintaining the nutrition at as perfect a point as possible and in diminishing as far as may be all inherited and acquired tendencies to disease.

Medicine Among the Arabs.—A German scientist and physician spent six months lately in the Sinai Desert to collect certain data, and incidentally noted some interesting facts in regard to the diseases prevalent among the Bedouins and their treatment of them. He never found the slightest trace of tuberculosis, and therefore announces that the ideal sanitarium for consumptives might be erected there, if the desert were not so absolutely inaccessible, as it is the only place yet discovered where this disease is unknown to the native population. But it requires a train of camels and attendants to penetrate into the country. He found no trace of venereal disease, except among those Bedouins who had lived in Egypt. There are no doctors nor surgeons, and child-birth is accomplished in a standing posture. If the presentation is wrong, the woman is

placed in a strong cloth and shaken or bounced until the position of the fetus is changed if possible. Puerperal fever is frequent, as might be expected from the lack of cleanliness, and the old women proceed to drive out the fever devil by sticking red hot needles in the woman, beginning at the head and ending by driving him out at the feet, while all howl in chorus. Malaria prevails in Tor and other low places, but the mountains are always a sure retreat in the malarial season, where escape is also found from the cholera trailing after the pilgrims returning from Mecca.—*Dtsch. Med. Wochsch.*, April 9–16.

Primary and Secondary Lesions of the Nerve Cells.—Marinesco has been continuing Nissl's histologic studies of the nerve cells, and reported as follows to the Société de Biologie, January 25: It is known that the nerve cell is composed of a homogeneous, fundamental part (trophoplasm), which contains within it elements colored strongly by the basic anilin colors—chromatophilic elements, or kinetoplasm, surrounding the nucleus and radiating into the protoplasmic elongations. The axis cylinder, of a fibrillary structure, belongs with the fundamental part of the cell, to the trophoplasm. The trophoplasm presides over the nutrition of the nerve and muscle fiber. The kinetoplasm is an apparatus destined to transform sensory or motor impressions. After section of a motor nerve, the kinetoplasm disappears progressively, from the periphery to the perinuclear layer. The axis cylinder and the myelin remain intact. The absent kinetoplasm may reappear if the trophoplasm is not altered. If the trophoplasm is affected, the axis cylinder becomes atrophied and degenerates. From these studies, Marinesco announces the pathogenesis of peripheral neuritis: The lesions of the central end, incorrectly called ascending neuritis, are due to the alteration of the trophoplasm of the nerve cell. Primary affections of the spinal cord induce at the same time, a lesion of the kinetoplasm and of the trophoplasm.—*Revue Int. de Méd. et de Chir.*, April 10.

The Surgical Staff of the Cuban Force.—The *New York Herald* correspondent in Cuba writes that the surgical corps in the Cuban army consists of eighty physicians, distributed among its six different corps. The head of the service is Dr. Joaquin Castillo Duany, surgeon general, a graduate of an American university, and formerly attached to the United States Navy, in which capacity he formed part of the crew that started in the *Rodgers* as a relief expedition to the *Jeannette*. When the present revolution broke out he was medical inspector at the Juraque iron mines. He joined the ranks of the Cubans, together with Mr. Kilpatrick, one of the managers, and several other employes, all Americans. Surgeons in the Cuban army have no limited time of service, receive no pay, acquire no fame or rank. These men, brought up under the refining influences of civilization, abandon their practices, their homes, their families, and start on a gloomy career of hardship and danger, with the possibility of being caught by the Spaniards and shot by the roadside. The surgeons are all provided with first-class French instruments, and in their operations they always make a lavish and intelligent use of antiseptics, for in Cuba's burning climate tetanus and secondary suppuration set in with astonishing rapidity. Drugs are often hard to obtain, there being no regular base of supplies. In many cases where mercury, bichlorid, iodoform and carbolic acid are unattainable, wounds are sprinkled over with finely powdered burnt coffee, which proves a powerful antiseptic. Fevers are often and successfully treated, in default of quinin, with a decoction of the "cundeamor," leaves from creeping plants of valuable febrifuge properties. As alcohol can be had plentifully at any sugar plantation in a reasonably pure state, tinctures of many native plants are constantly prepared which are found effective by previous trials. Chloroform and ether are things unheard of in those wildernesses, and nothing illustrates more graphically the Spartan heroism latent in the Cuban nature than the unflinching way with which they submit in full consciousness to the ominous knife. It is not strange to see a man there light his cigar and look on coolly while his arm or leg is being amputated, just as if it were a matter of no concern to him.

Indorsement as a Legally Chartered Medical School.—A graduate of the medical department of the Laval University, a legally chartered medical college in Montreal, Canada, applied for a certificate to practice medicine in Rode Island, but was refused one by the State board of health, on the ground that Laval University had not been indorsed by them as a reputable and legally chartered medical college. It appeared, however, that if he had presented with his diploma a license to practice medicine in Canada from the College of Physicians and Surgeons, a board similar to the State board of health of Rhode Island, the latter would have granted him a certificate to practice. And the evidence showed that the license of the college of physicians and surgeons was granted as a matter of course to those holding diplomas from the Laval University, who, like this party, had been found by the governors of the college of physicians and surgeons qualified to pursue the study of medicine, and had been registered in the books of the college as having commenced the study, on the payment of the prescribed fee. Moreover, the evidence showed that in several instances the State board of health of Rhode Island had granted certificates to practice to graduates of Laval University, who, having practiced medicine in Canada prior to coming there, had the license of the college of physicians and surgeons. If this was so, inasmuch as the license of the college of physicians and surgeons was granted to holders of diplomas of Laval University, of the class mentioned, without examination, merely on the payment of a prescribed fee, the supreme court of Rhode Island holds, Boucher v. State Board of Health, Feb. 11, 1896, that the granting of certificates by the State board of health to other graduates of Laval University, qualified as above stated, was, in effect, an indorsement of that university by them as a legally chartered medical college, to the extent mentioned, and that they therefore erred in refusing a certificate to this applicant merely because, not wishing to practice in Canada, he did not pay the fee and obtain the license from the college of physicians and surgeons.

Arkansas Prefers County Medical Examiners.—A law was passed in Arkansas in 1895 providing that the county courts of the several counties of the State shall appoint a County Board of Medical Examiners in and for their respective counties; such board to consist of three members, learned in the sciences of medicine and surgery, of good moral character, and duly registered, while two members of the board shall be graduates of some reputable medical college. The term of office is four years. But the county judge may at any time remove any county examiner for drunkenness or other immoral conduct. Each board is to hold at least two meetings a year at the county seat. In counties having two judicial districts there may be appointed two separate boards, one for each district, in the same manner and with like effect as provided for separate counties. The County Board of Medical Examiners is authorized to examine all persons who may desire to practice medicine who are residents of the county with the board, that may apply, and if found qualified to practice medicine and surgery, issue a certificate which shall entitle the holder to practice in the county in which it is issued or in any county into which his practice may extend, so long as his residence remains in the county wherein the certificate is issued. Such applicant shall pay the county board a fee of $6 for the examination. Sections 4968, 4969 and 4970 of Sandels and Hill's digest, providing a State Board of Medical Examiners and the issuance of licenses by it, and all other laws in conflict with this 1895 enactment, are repealed. This bill, it is stated in a footnote

signed by the Speaker of the House and President of the State Senate, having been returned by the Governor with his objections thereto, and after reconsideration, having passed both houses by the constitutional majority, it has become a law.

Resection of the Wrist by a Dorso-palmar Incision.—At a recent meeting of the French Association for the Advancement of Sciences, M. Francis Villar, of Bordeaux, read a paper on resection of the wrist by the double longitudinal incision. Resection of the wrist, he says, is not much in vogue among surgeons. This is probably because the results for a very long time were not extraordinary, but since the antiseptic method and the researches of Professor Ollier, we are better able to judge of its value. The mortality is practically *nil*, and the functional results are often perfect. The methods of operating at our command are few in number, and attention is directed to the method under consideration which is but little known, but which will render valuable service at least in certain cases. Introduced by Studsgaard in Copenhagen, and practiced by Novaro, Bassini and Odisio in Italy, it does not seem to have attracted French surgeons, for Villar has been unable to discover any other case than his own operated on in 1893. The method is as follows: The incision is commenced on the back of the hand a little above the line of the radio-carpal joint and is prolonged to the end of the web between the third and fourth fingers. The extensor tendons are held aside and the interosseous muscles divided. The first incision is now continued from the web on to the palmar surface and up to the line of the joint or a little higher. This done the soft parts of the palm are divided, taking care to avoid the tendons and the median nerve. The superficial palmar arch is tied. If the two parts of the hand are widely separated (one of these consisting of the first three fingers, the other of the remaining two) the carpus is reached and nothing is left save to extirpate the different bones. While at first sight it would seem that this method causes considerable mutilation, repair takes place rapidly, as the cases published show. There are two striking advantages connected with this method. 1. It is much easier than the classic methods. It is no small task to separate the carpal bones connected by strong and resisting ligaments through the ordinary incisions. 2. It gives considerable room and allows osteo-articular or tendenous lesions to be followed throughout their whole extent. The therapeutic and functional results are excellent, and the method is especially indicated in cases of extensive lesions. (*Le Bulletin Médical*, 1895, No. 67.)

Operation for Epithelioma Incidentally Cures Prostatic Hypertrophy.—Mr. Southam, of Manchester, England, is reported in the *British Medical Journal*, as reporting upon the favorable effects of castration for prostatic hypertrophy. In one case the patient for more than two years previously had passed no urine except by catheter. On the fifth day after the operation, which was performed as self-catheterization had become very painful, difficult, and attended with hemorrhage, he began to regain the power of voluntary micturition and he could now dispense with the catheter, the urine being passed in a feeble stream with slight straining. To illustrate the effects of double castration upon the prostate, Mr. Southam also showed a patient, aged 71, on whom he had operated fifteen years previously for epithelioma recurring in the stump of the penis after amputation, both testes together with the remains of the penis and the entire scrotum being removed. There had been no further recurrence, and on examination by the rectum at the present time no indication of the presence of the prostate could be detected, its position at the neck of the bladder being represented by a depression or sinking-in of the anterior wall of the rectum at this spot. The same journal quotes Albarran in *Presse Médicale*, as drawing a discrimination between the effects of castration upon the contractility of the bladder, and upon the prostate, and between the effects upon the latter organ when hypertrophied and when normal. The writer has observed that in many cases after operation a rapid shrinking of the prostate is observed to follow in from one and one-half to two months. The glandular culs-de-sac, instead of being pressed together, are found separated by large spaces into a series of independent glands. There is a degenerative disintegration of epithelium which before disappearing takes on an embryonic type, but there is no proliferation of muscular or connective tissue; these appear abundant owing to the shrinking of the glandular tissue. Double castration causes atrophy of the normal, but not necessarily of the hypertrophied prostate, and evidence on this latter point is wanting. Clinically speaking, an atrophied prostate is one which has ceased to be felt by the rectum. But congestion accounts for at least one-third of the enlargement, and relief of retention where it exists is usually due to the diminution of this. Diminution of the volume of gland admits of increased vesical contractility, and thus aids in relieving or curing the retention. The value of operation lies in securing these results. In dysuria without retention, where the vesical and prostatic congestion causes frequent micturition, though castration gives relief, any measures for the diminution of the cystitis also relieve, and operation is unnecessary. In acute retention the operation is not called for. In incomplete retention, benefit is obtained for the reason that as the prostate becomes atrophied, the bladder acts with greater freedom. In chronic complete retention, complete cure often results, if there is no marked thickening of the walls of the bladder.

Centenarians of Chili and California.—In a recent issue of *Leslie's Weekly* is an illustrated article giving information regarding and photographs of some of the very old men and women of the American continent. The writer says:

The last census of Chili shows an unusual proportion of extremely old people among the population, there being 211 men and 223 women in that country who have passed the century mark. The age of the oldest, Rafael Munoz, of Colchaqua, was returned to the enumerators as 150. Three others were more than 130, and thirteen had passed 120, while fifty-three women and thirty-eight men gave in their ages as 110. A full report of the centenarians in the United States would surprise many of its readers, for the number of men and women who have attained great age is much larger than is generally supposed; and if the old could defy such accidental diseases as *grippe* and pneumonia their limit of life would be considerably extended. If in Chili the conditions are such as to prolong life, it would seem that California, particularly its southern portion, must be an equally favorable place for longevity. The climate is similar to that of Chili, and the mode of living among the natives does not differ greatly. There are some very old people in this State. As an out-door life tends more than anything else to longevity, it is not surprising to learn that the oldest man of whom we have any record in the United States was an Indian. His name was Gabriel, and he was a well-known character of Castroville, Cal. until he died in 1890, at the age of 147. There is now living in Southern California an Indian chief, the head of the Sobobo tribe, who is 136 years old and has a wife considerably past 100. There is an Indian dame at San Gabriel whose age is vouched for at 118. Close by the walls of the best preserved mission on the coast live three venerable women who are widely known as "The Belles of San Luis Rey." One of them claims to be 128, and the others are more than 120. They saw the first mass that was celebrated in the mission walls. Relics of bygone era, they appear to enjoy the attention which every visitor bestows upon them, but they are decidedly averse to the camera, and were with difficulty persuaded to sit for the photograph. In the Mexican division of the grand *fiesta* procession at Los Angeles, in the spring of 1894, rode Don Ygnacio Francisco de la Cruz Garcia, upright, apparently vigorous, managing his horse with the skill of a *caballero*. No person unacquainted with his history would have surmised that he had long passed the century mark, yet his age was 113. He is now often seen walking near his home in the city, and is in possession of all his faculties, even that of sight, although at one time he was totally blind. There can be no doubt about his age, for he holds a certificate for his baptism on May 4, 1781, in a Catholic church at San Jose de Gracia, in Mexico. He has a son 86 years old and his youngest child is 60.

A Mild Protest Against Bacterial Diagnosis at the London Pathological Society.—An editorial comment in the *Medical Press and Circular*, on the recent discussion before the Pathological Society of London, shows that some slight "conservative" opinion still exists in high circles regarding the bacterial diagnosis of diphtheria. The following is a portion of the editor's cautious, almost gingerly, handling of his subject. The editor's heart is in the right place, however, and this is a part of what he has to say: "It seems that virulent diphtheria bacilli may linger for an indefinite period in the mouth secretions of persons who have recovered from an attack; indeed, in a case mentioned by Dr. Hewlett at the Pathological Society, they were detected twenty-three weeks after the onset of the malady. This observation possesses a special significance, in view of the fact that the later investigations were undertaken at the behest of a schoolmaster who feared that the lad might, on his return to school, be the means of disseminating the disease; a well-founded suspicion, as events proved it to be. Mr. Butlin, the president, took advantage of the opportunity to review the situation in respect of the bacteriologic diagnosis of diphtheria. It seems that medical practitioners in the district where he resides are now provided by the authorities with the necessary facilities for obtaining expert opinion in respect of the secretions in suspected cases, an excellent innovation one would think, but one which he nevertheless seems to think somewhat vexatious. He also referred to the practice in the larger cities of the United States, where he assured them it had become the custom for the medical officer of health to at once visit and inspect all reported cases of diphtheria without going through the usual formality of asking the practitioner in charge to meet him in consultation. Mr. Butlin appears to dissent from the idea that the diagnosis shall be determined solely on bacteriologic data, and he suggested that the society might 'do something' to clear up a situation which, in his opinion, was full of danger to the public as well as to the profession. Before anything can be done, however, it will be necessary for us to know exactly what the danger is and how it is brought about, points as to which Mr. Butlin was silent. He questioned the importance attached by the speaker to the presence of these virulent bacilli after so long a period, and suggested that there were probably hundreds or even thousands of persons similarly inhabited by virulent bacilli wandering up and down the country apparently without detriment to the public welfare. How he arrived at the 'without detriment' conclusion he did not say. It occurs to us that possibly the existence of these ambulatory foci of infection may explain the ever increasing spread of the disease in spite of all the precautions that have been taken to check its ravages. We must confess that we do not clearly see what the society can do to clear up the situation. The Pathological Society, of all others, could hardly venture to throw cold water on the value and importance of bacteriologic investigation, but unless they declare bacteriology to be a scientific fad and a delusion, it is difficult to see how they can enter a protest against its practical application to diagnosis. If the culture from the saliva of a given person is capable, as in Dr. Hewlett's case, of determining the death of guinea pigs in a few hours, even Mr. Butlin would hardly wish to introduce him to his family circle, his skepticism to the contrary notwithstanding. This being so, his protest would appear to be singularly inopportune, and, as coming from the President of the Pathological Society, somewhat regrettable." This may, we think, be taken for the last expiring protest by the "conservative element" against the full and free adoption of modern laboratory diagnostic work.

A Proposed Diploma Mill Under British Flag.—The *British Medical Journal* pours hot shot into "The College of Physicians and Surgeons of Bengal," which a few medical practitioners of Calcutta have formed into a voluntary association for the double purpose of corporate combination and medical education without state aid or interference. Practitioners throughout India have been invited to become members of this "College" without ceremony or test, and fellowships on similar terms will no doubt be instituted ere long. A medical school has been started, and was declared open on January 13, by Dr. Juggobundo Bose, who delivered an inaugural address on the occasion. A prospectus of this school has been published. The curriculum is to extend over four years. Students are to pay the modest sum of 3 shillings and 6 pence for matriculation, and a fee of like amount monthly in advance for instruction. Courses of dissections, of practical chemistry, and of practical physiology are to cost severally three rupees extra. The diplomas L.C.P. and L.C.S. are to be conferred at the end of the curriculum after examination, for which a moderate additional fee of 25 rupees is claimed. The subjects of examination are stated. A president, four vice-presidents, and lecturers have been appointed, and the whole scheme looks very regular and complete on paper. No state sanction or charter has apparently been obtained for this enterprise, no capital provided, no arrangements made for dissections or hospital instruction, no library, museums, or laboratories established; no provision made for practical teaching of any sort. The instruction imparted would seem to be enclusively oral, and the character of the final examination may be judged of by the fact that "operations on the mannequin" is one of the tests. With every sympathy for any movement which has for its object the consolidation and coöperation of the medical profession in India, and the exercise of self-help in medical education, we can not help entertaining a strong doubt whether this scheme, as at present constituted, is likely to be a sound and safe one, or to accomplish the end which all wishers of India desire, namely the elevation of the medical profession and the larger participation of locally educated men in the medical and sanitary work of the empire. The requirements of a complete and practical education in medicine are so many and so costly in these days that it is a matter of amazement how any combination of medical men in India can have the hardidood to propose a scheme of training and licensing medical practitioners without having in the first instance and as a necessary preliminary obtained the funds and appliances and organized the arrangements requisite for scientific instruction. It is equally a subject of wonder how the government of the country can tolerate a dangerous and retrograde enterprise of this character. The graduates and licentiates of Indian universities and schools obtain their qualifications to practice under sanctions and conditions which ensure a thorough training according to modern principles and methods, and stamp their status in the community with authority. The so-called "College of Physicians and Surgeons of Bengal," as at present devised, is a sham, and its licentiates will, if no change takes place, constitute a very inferior class of medical diplomates. There is unfortunately no council of medical registration and education in India to safeguard the public against pretence and incompetence. But the government is able, through the universities, to control educational matters and insist that educational institutions shall be properly equipped and officered, and competent to impart sound instruction.

Practical Notes.

The Thyroid Preparations at the Medical Congresses in April.—Ewald's masterly critique of this subject was the feature of the XIV Congress für innere Medicin, held at Wiesbaden. It was in favor of the new medication, which he considers a very valuable contribution to therapeutics, especially Baumann's Thyro-iodin, to use in fighting myxedema and goitre. Thyroid medication for fibroma of the uterus was also the leading article presented at the Congress at Carthage, by Jouin, of Paris, who has obtained marked improvement with it in fibrous uter-

ine tumors and obstinate metrorrhagia, and suggests that it may yet be found invaluable in the early stages of tumors, sarcoma, etc.

A New Antiseptic Tablet for Nasal Solutions.—The *American Therapist* states that Dr. Murray McFarlane, of Toronto, having become dissatisfied with Seiler's and Dobell's solutions as being too irritating in the majority of cases, has used with success a tablet containing the soluble salts of the blood plasma, which when added to two ounces of lukewarm water, forms a solution like blood plasma. Each tablet contains one-sixteenth of a grain of menthol.

Theobromin as a Diuretic.—Huchard announces that he has found theobromin a very valuable diuretic in cardiac and renal troubles, and has studied it carefully in more than two hundred cases. Its action is prompt, reliable, and often succeeds where digitalis and caffein have failed. A medium dose is two or three grams a day in half centigram powders, although as much as four or five grams can be given with impunity. Combined with a milk diet the therapeutic results are exceedingly satisfactory in infective diseases.—*Union Médicale*, March 7.

Boas' Powders.—These powders are valuable in relieving the attacks of pain in gastric ulcers:

R.	Exalgin	3.00
	Extract of belladonna	0.30
	Phosphate of codein	0.30
	Sugar of milk	5.00

Misce. Sig. Make ten powders. Take one as the attack comes on. Pure codein or the hydrochlorate can be substituted for the phosphate.—*Semaine médicale*, April 8.

Insufflation of Air in Tuberculous Peritonitis.—When the patient is so invaded by tubercular lesions in the pleura and lungs, fevers, etc., that he is unable to stand the shock of a laparotomy, simply puncture and the introduction of air into the peritoneum, will often bring relief, and the physician should always resort to this supreme means, instead of passively allowing the case to proceed to a fatal termination without it. This method may even prove more beneficial than laparotomy, and Mosetig Moorhof considers the introduction of air under pressure more liable to be followed by success than a laparotomy.—Lenoir in the *Revue Int. de Méd. et de Chir.*, April 10.

Carbonic Acid in Sterility.—By its stimulating effect in the peripheral nerves, and especially on the sexual system, carbonic acid in the form of water or gas baths, has a direct beneficial action in cases of masculine impotency, particularly in premature senile impotency, and in female dyspareunia and anaphrodisis (absence of sexual excitation), to which sterility is often traceable. It is also recommended in neuralgia of the uterus and ovaries and in dysmenorrhea. It is espeically valuable in amenorrhea, administered in gas baths, gas douches and carbonic acid salt baths. Conditions of excessive sexual excitability strictly contraindicate its use.—Schuster, of Nauhaim, in the *Therapeutische Wochenschrift*, March 15.

Formol, Formalin, Formaldehyde.—The use of this substance is increasing and growing more important every day in therapeutics, industry and for many other purposes. This JOURNAL, pages 543, 588, 645, 695, has described its application to ophthalmology, dentistry, the disinfecting of catgut and the preservation of specimens. The *Therapeutische Wochenschrift* of March 15, reports some later therapeutic successes with it. Gaylord and Frank have found it extremely beneficial in ulcus molle, in a 40 per cent. solution with which they painted the surface of the ulcer, which heals and sheds the cauterized surface in less than a week. The pain is severe but soon passes away. Also condylomata acuminata yields to this treatment. Lamarque uses a 1 per cent. solution of formaldehyde in cystitis tuberculosa, or instills it once a day in a 5 per cent. solution. Barabaschew recommends it in a 1 to 2000 or 1 to 4000 solution in chronic inflammatory conditions of the connective tissue membrane.

Myoclonia.—The meeting of the Association for Psychiatry and Neurology in Vienna, February 11, was mainly devoted to a discussion of this subject, as a patient was presented, suffering from a typical case that had commenced a year and a half previously. The paroxysms were violent, lightning-like contractions of the whole muscular system, from which only the muscles of the eyes, tongue and the peripheral muscles were exempt. One member was impressed with the resemblance between these spasms and those produced in animals by the removal of the thyroid glands. He had already treated cases that showed somewhat similar symptoms, combined with struma, with thyroid extract, and the cramps had disappeared. This treatment was recommended for this disease generally, and especially this case.—*Wiener klin. Rundschau*, March 15.

Hydrotherapeutic Treatment of Multiple Neuritis.—Suggested by Pospischil of Krems, this treatment has the advantage that it can be employed from the very first moment of the acute attack instead of waiting, as usual, for further developments. The painful members are wrapped in a bandage dipped in ice water, outside of this there is a layer of cotton, all held in place by another bandage. The bandages are removed and replaced with fresh two or three times a day. A small quantity of sublimate added to the water, is a wise precaution to render the bandages aseptic. The pains subside rapidly with this treatment and the members cease to be contracted; when this arrives, in the course of two to three weeks, while the attack is still acute, the whole body is wrapped in a wet cloth, and then rolled in a blanket and an eider down placed over the patient. The intense perspiration thus induced hastens the elimination of toxins causing the disease, and exerts a most favorable effect upon the whole system.—*Semaine Médicale*, April 29.

Antidiphtheritic Serum Administered by Rectal Injection.—Dr. Chantemesse, of the Pasteur Institute of Paris, has advised the exhibition of diphtherial antitoxin by rectal injection instead of subcutaneously. He has used this method in twenty cases, and believes that the fluid is easily and quickly absorbed. The bowel is first washed out by a simple enema, and then by means of an ordinary enema syringe and a gum elastic catheter of medium size and about twenty centimeters long, the serum is introduced into the rectum. The method causes neither pain nor any unpleasant effects. The curative effect seems to be as certain as when the antitoxin is given by hypodermic injection. There is no need, so far as Dr. Chantemesse's experience goes, for any increase of dose when the serum is administered by the rectum. In severe cases of erysipelas he has injected into the rectum 200 to 300 cubic centimeters of the Marmorek serum. This quantity was readily absorbed and caused no ill effects. In applying this serum locally he adds five parts of lanolin to one part of the serum: pain, swelling and redness are thereby greatly reduced.

Are the Failures in Treating Hypertrophied Prostate with Castration always Reported.—Czerny, of Heidelberg, doubts it. His experience in three cases has been that it was not followed by improvement, but rather by a series of ills, and it is a serious matter for a surgeon to cripple his patient in this way, without the slightest benefit to him. It is scarcely two years since Hegar's "Castratio Muliebris" to reduce myoma, was transferred to the male to reduce the prostate, which is so much less intimately connected with the spermatica interna than the uterus in the female. In that time White has collected 111 observations, and Bruns in the *Mitth. a. d. Grenzb. der Med. and Chir.*, Vol. 1, No. 1, has stated the results of 148 observations, with a large number permanently freed from their pre-

vious inconveniences and 23 deaths. Czerny comments that at least the patient should be fully warned, and he hopes that the contraindications will soon be more definitely established. In cases of myoma of the prostate, or excessive development of one part, Bettini's galvano-caustic incision into the prostate is to be preferred as castration would probably have little effect on the flow of urine. This operation in the hands of a skillful operator, with a good apparatus (*Langenbeck's Archiv.* Vol. XXI, No. 1.) Czerny believes is destined to prove a blessing far more than is generally accepted at present.—*Dtsch. med. Wochsch.*, April 16.

Care of the Ear During the Exanthemata.—Dr. Walker Downie, of Glasgow, writes to the *Journal of Laryngology, Rhinology and Otology* regarding 400 cases of otitis media in children, the cause of which in about 60 per cent. was fairly determined to have been measles, scarlet fever, whooping cough, mumps or teething. From the very beginning of the illness, where there are any catarrhal symptoms, the patient should be directed to use the handkerchief frequently and strongly, the object being to clear the nose and nasopharynx of mucopurulent products, and to prevent them from settling and decomposing around the Eustachian orifices, through which infection of the ears takes place. If the child can not do this effectually the Politzer inflation bag should be used. The quantity of secretion dislodged and thrown into the mouth by this means is astonishing. When there is dullness of hearing or pain in the ears, resort to inflation should never be delayed. When the pain in the ears is acute, and should immediate relief not be obtained from inflation, and especially if there is a sudden rise of temperature without other explanation, the tympanum should be punctured without delay. Have the head securely held; have the membrane brightly illuminated; use an arrow-shaped paracentesis knife with a shoulder; puncture the tympanic membrane in its lower and posterior part. The operation not only relieves the immediate pain, but saves the deeper structures of the ear and prevents the misery of a chronic otorrhea with its attendant risk.

Treatment of Heart Troubles During and After Pregnancy.—According to Phillips in the *Revue des Mal. des Femmes*, for January, the different forms of cardiac lesions to be apprehended are: 1, adherences due to an old pericarditis, or displacement of the heart from pleural adherences; 2, myocarditis and degeneration of the cardiac muscle; 3, endocarditis affecting the valves; 4, endocarditis in an acute form, grafted on a chronic form. During pregnancy, if there is no symptom of cardiac insufficiency, it is enough to forbid going up stairs, and to keep the digestive functions in good order. The disorders indicating that the lesion is no longer compensated, do not appear before the fifth month, after which the patient must be kept in a reclining position. Arsenic, iron and strychnin will combat the weakness of the heart; ether and ammonia in case of syncope. If there is edema and dyspnea, digitalis and strophanthus can be given, even in cases of aortic lesion. During labor the dyspnea is less if the patient sits, and the dyspnea may necessitate injections of ether, or even the premature rupture of the membranes before the dilation of the neck is complete. Delivery must be hastened, and forceps used as soon as the dilatation of the neck is complete. An anesthetic must be employed, preferably ether. During the extraction, it will be well to lay on the abdomen, a bag of sand weighing about a dozen pounds, to avoid the abrupt drop of the blood pressure in the abdomen. That after delivery is the most dangerous period, and it lasts four days. Hemorrhages are not to be feared, but rather encouraged, and the threatening symptoms are due to the distension of the right side of the heart. No ergot nor injections of ergotinin can be permitted at all, but amyl nitrite is theoretically indicated, and gives good results in practice. Subcutaneous injections of ether and strychnin are very useful. In certain serious cases abortion has been advocated, but Phillips opposes this, as it is often followed by immediate death.—*Revue Int. de Méd. et de Chir.*, April 10.

Stypticin.—Gottschalk in *Therapeutische Monatshefte* records the results of the use of this drug in forty-seven cases of bleeding from the uterus. Stypticin is a yellowish powder, readily soluble in water, it is a hydrochlorid of cotarnin, one of the oxidation products of the opium alkaloid narcotin; in chemic structure it is closely allied to hydrastinin. It can be given subcutaneously, or more conveniently in powder or gelatin perles. The earliest experiences of its employment were not favorable, owing to too small a dose being given. Gottschalk finds that 0.05 gm. can be taken five or six times a day without any evil results. It has a great advantage over hydrastis and other uterine hemostatics, in that, as might have been expected from its source, it possesses a well-marked and potent sedative action which is both local and general, and hence specially indicates its use in dysmenorrheal affections. Stypticin checks promptly hemorrhage resulting from pure uterine subinvolution, that is, that due to muscular atony and not to retention of membranes, etc. In cases arising from the latter cause ergot and hot douches together are better. In fungous endometritis stypticin is a valuable adjuvant to the curette; it is very useful when the patient objects to curetting, and particularly those cases in which this treatment does not stop the hemorrhage. It is also useful in bleeding caused by fibroids or the climacteric. In hemorrhage secondary to parametritis or diseases of the appendages it is less effectual than hydrastis. In such cases, however, idiosyncrasy is usually marked, and a cure is often not effected till the changes have been rung on all the various hemostatics. In purely congestive menorrhagia it is well combined with hydrastis. Stypticin is powerless to control the bleeding of uterine polypi, and is contraindicated in threatened abortion, or indeed in any of the hemorrhages of pregnancy, as it has a marked power of stimulating uterine contraction. This may be induced by it directly or result indirectly from the anemia produced by its vaso-constrictor action.

Hospital Notes.

Hospital for Children at Pittsburg.—Henry C. Frick, chairman of the Carnegie Steel Campany, will build a hospital for children on Squirrel Hill, Pittsburg, Pa., within a year, to cost $500,000. The building will be on a plot of forty acres, which will be transformed into a private park and flower garden. The hospital will be placed under the control of the Protestant Episcopal Church.

The new St. Joseph's Hospital Building in Joliet, Ill., was dedicated May 7 with elaborate ceremonies. St. Joseph's Hospital is a model institution, and is valued at $70,000, and has a capacity for 125 patients.

One Hundred and Forty-five Years Old.—The one hundred and forty-fifth annual meeting of the Philadelphia Contributors to the Pennsylvania Hospital was held in the library room of the institution May 4. Frederick Fraley was called to the chair, and Arthur Biddle, counsel for the hospital, was appointed secretary of the meeting. The annual report of the Board of Managers was read, giving an account of the work and progress of the hospital during the past year.

Detroit.

At the regular meeting of the Detroit Medical and Library Association, May 11, Dr. J. Flinterman presented a paper entitled, "Degeneration."

The Wayne County Medical Society, at its regular meeting May 14, inspected Elosie and Wayne about forty strong. At Elosie, Dr. E. O. Bennett, Superintendent of the Asylum, had them shown through the asylum, and partake of a luncheon, after which he sent them on their way rejoicing, in private and public conveyances, to Wayne, about two miles dis-

tant, where in the evening, at the Methodist Episcopal church, the regular weekly meeting was held. The program was as follows: Dr. R. H. Honner, "Intestinal Antiseptic in Typhoid Fever"; Dr. A. D. Holmes, "Broncho-pneumonia in Children"; Dr. E. F. Stewart, "Commercialism in the Practice of Medicine"; and Dr. E. B. Smith, "Surgical Treatment of Wounds." After the meeting, Mrs. S. A. Morrison, widow of the late Dr. Morrison, tendered a reception and banquet at her residence to the members of the society.

HEALTH OFFICE REPORT for week ending May 16: Deaths under 5 years 47, total 103; births, male 49, female 57, total 106. Contagious diseases: Diphtheria, last report 12, new cases 9, recovered 4, died 1, now sick 16; scarlet fever, last report 28, new cases 6, recovered 6, died none, now sick 28; measles, last report 1, new cases 1, recovered 2.

Louisville.

KENTUCKY MEDICAL ASSOCIATIONS.—The Southern Medical Association held its third semi-annual meeting at Russelville, May 12–14, with about eighty members and a number of visitors from Tennessee present. The following are the officers: President, Dr. D. G. Simmons, Adairsville; Vice-President, Dr. H. C. Cartwright, Bowling Green; Secretary, Dr. R. W. Frey, Trenton; Treasurer, Dr. C. G. Mosley, Casky.

THE SOUTHWESTERN MEDICAL ASSOCIATION held its twenty-fifth annual convention in Paducah, May 12–14. The following are the officers elected for the ensuing year: Dr. J. T. Reddick, Paducah: Vice-President, Dr. M. W. Rozell; Secretary, Dr. P. H. Stewart: Treasurer, Dr. C. H. Brothers. Dr. R.A. Hibbs, of New York, was made a life member, and eight regular members were added to the list.

UNDERTAKERS.—Complaint having been recently lodged with the mayor in regard to the lax way the undertakers have of obtaining signatures to death certificates, an order has been issued that they be compelled to comply with the law which requires all death certificates to be filed with the health officer before a permit for the burial can be had. This order was made to apply to the officials at the cemeteries who allow the burials to take place and trust the undertaker to see to the permit later. The case reported to the mayor was as follows: A death occurred in a prominent institution and the officials allowed the undertaker to attend to all the details. The burial took place and ten days afterward the attending physician to the institution thinking it queer that he had not signed the certificate investigated the matter and found that the death return had not been handed in, yet the burial had been allowed to take place at the cemetery. No such methods will prevail now.

COMMENCEMENT.—The commencement season for the spring and summer medical schools is at hand, the Hospital College of Medicine and the Kentucky School of Medicine being schools of that character. The latter school will this year inaugurate the wearing of the regular university cap and gown, by both faculty and graduating class, an innovation which will prove popular and will no doubt be adopted by the other colleges in the course of time.

LOUISVILLE MEDICAL COLLEGE.—Dr. A. M. Cartledge, formerly Professor of Surgery and Clinical Surgery in this college, has resigned this position to accept the chair of Gynecology made vacant by the retiring of Professor Ireland, who becomes Professor Emeritus of the same branch. Dr. W. C. Dugan has accepted the chair made vacant by the resignation of Dr. Cartledge.

DR. J. M. BODINE, Dean of the Medical Department of the University of Louisville, has been the recipient of many congratulations on account of his election at Atlanta to the position of President of the American Medical College Association.

DR. TODD.—The many friends of Dr. Lyman Beecher Todd, of Lexington, will be sorry to learn of the sad accident which befell one of his daughters on the 13th inst. While out bicycle riding in an attempt to cross in front of an electric car she was struck and thrown under the car and almost instantly killed, the front wheels running over her chest.

THE PUBLIC SERVICES.

Army Changes. Official List of changes in the stations and duties of officers serving in the Medical Department, U. S. Army, from May 8 to May 15, 1896.

Major H. O. Penley, Surgeon, granted three months' leave of absence, to take effect about July 1, 1896.

First Lieut. James M. Kennedy, Asst. Surgeon (Ft. Missoula, Mont.), ordered to Ft. Yellowstone, Wyo., for temporary duty with troops in the field, in the National Park, during the season.

PROMOTIONS.

To be Assistant Surgeons, with the rank of Captain, May 4, 1896, after five years' service: First Lieut. William F. Lippitt, Jr., Asst. Surgeon; First Lieut. Merritte W. Ireland, Asst. Surgeon; First Lieut. George M. Wells, Asst. Surgeon.

Navy Changes. Changes in the Medical Corps of the U. S. Navy for the week ending May 16, 1896.

Medical Inspector R. A. Marmion, detached from the "Newark," ordered home and placed on waiting orders.

Surgeon L. B. Baldwin, detached from the "Cincinnati" and ordered to the "Newark."

Surgeon N. H. Drake, detached from the "Franklin" and ordered to the "Cincinnati."

P. A. Surgeon I. W. Kite, detached from the naval hospital at New York and ordered to the "Franklin."

P. A. Surgeon P. Leach, detached from the naval laboratory, New York, and ordered to the naval hospital, New York.

Medical Inspector R. A. Marmion, ordered as member of the board of inspection and survey June 3, and member of medical board, navy yard, Washington, D. C.

Medical Director W. K. Van Reypen granted three months' leave of absence from June 3, with permission to leave the United States.

Marine-Hospital Changes. Official list of changes of station, and duties of Medical Officers of the U. S. Marine-Hospital Service, for the fifteen days ended April 30, 1896.

Surgeon R. D. Murray, granted leave of absence for four days, April 30, 1896.

Surgeon J. B. Hamilton, granted leave of absence for fourteen days, April 21, 1896.

Surgeon G. W. Stoner, detailed to represent Service at meeting of American Medical Association at Atlanta, Ga., April 29, 1896.

BOARDS CONVENED.

Boards for physical examination of candidates for appointment in revenue cutter service:

At Philadelphia, Pa., Surgeon George Purviance, chairman, and P. A. Surgeon G. T. Vaughan, recorder, April 22, 1896.

At San Francisco, Cal., Surgeon John Godfrey, chairman, and Asst. Surgeon Rupert Blue, recorder, April 28, 1896.

At Washington, D. C., P. A. Surgeon C. E. Banks, chairman, and Asst. Surgeon W. J. S. Stewart, recorder, to convene May 1, 1896.

Change of Address.

Bryan, J. C., from 367 to 351 48th Street, New York, N. Y.

Carman, E. T., from 2400 Paulina Street to 3210 Malden Street, Chicago.

Fiske, G. F., from Chicago Opera House Bldg., to Room 612 Reliance Build., Chicago, Ill.

Hammond, J. C., Omaha, Neb., to Denison, Iowa; Harrison, W. K., from 52 Walton Place to 32 Delaware Place, Chicago, Ill.; Houston, James, from Detroit, Mich., to Ingersoll, Ont. Canada.

Krieger, Geo., from 6302 S. Halsted Street to 3242 Vernon Ct., Chicago.

Langer, C., from 7115 Cottage Grove Ave., to 7137 Langley Ave., Chicago, Ill.

MacDonald, C. E., from New York, N. Y., to Liberty Falls, N. Y.

Packard, J. H., from Philadelphia to Denver, Chester Co., Pa.; Potts, C. N., from Colorado Springs to Silverton, Colo.; Patch, Wm., from Irving to Cooksville, Ill.

Roberts, A. Sydney, from Philadelphia to Bala, Pa.; Raudebaugh, E. C., from Overton to New Pittsburg, Ohio.

Stowell, J. H., from Reliance Build., to Suite 907 Columbus Memorial Building, Chicago, Ill.; Spinney, C. N., from New York, N. Y., to 47 Montcalm Street, E., Detroit, Mich.

Thomas, C. P., from Everett to Spokane, Wash.

LETTERS RECEIVED

Ayer, N. W. & Co., Philadelphia, Pa.; Aaron, Chas. D., Detroit, Mich.; Burr, C. B., Flint, Mich.; Baker, Jas. B., Charlottesville, Va.; Bowman, A. H., Deadwood, S. D.; Bausman, A. B., Chicago, Ill.; Breedlove, J. W., Ft. Smith, Ark.; Brown, F. F., Adv. Agency, New York, N. Y.; Beach, H. H. A., Boston, Mass.; Brannon, L., Joliet, Ill.; Bird, E. H., Tampa, Fla.; Clausen, N. D., Hartford, Ind.; Cordell, E. F., Baltimore, Md.; Cole, Geo. L., Los Angeles, Cal.; Consumers Co., The, Chicago, Ill.; Cerna, David, Galveston, Texas.

Daly, J. N., Orangeville, Ill.; Dixon, Archibald, Henderson, Ky.; Dewey, Richard, Wauwatosa, Wis.; Davis, N. S., Chicago, Ill.

Foote, A. E., Philadelphia, Pa.

Garlington, T. R., Rome, Ga.

Haldenstein, J., (2) New York, N. Y.; Henkel, F. W. E., Chicago, Ill.; Hyde, James Nevins, Chicago, Ill.; Hummel, A. L., Adv. Agency, (2) New York, N. Y.

Irwin, Fairfax, Washington, D. C.

Keener, W. T., Chicago, Ill.; Kerr, H. Norman, Chicago, Ill.; Kelly, Howard A., Baltimore, Md.

Logan, H. V., Scranton, Pa.; Lydston, G. Frank, Chicago, Ill.; Leslie, Arthur, New York, N. Y.

Macey, The Fred, Co., Grand Rapids, Mich.; Miller, C. J., Whitewater, Wis.; Mohr, Paul, Cullman, Ala.; Merrick, M. J., Passaic, N. J.; Maltine Mfg. Co., The, New York, N. Y.

Newman, A., Paterson, N. J.; Niles, S. R., Adv. Agency, The, Boston, Mass.; National Home, National Home, Wis.; Nye, H., Enon Valley, Pa.; Parke, Davis & Co., Detroit, Mich.; Parmele, Chas. Roome, New York, N. Y.; Pompe, A. A., Chicago, Ill.; Parsons, James Russell, Jr., Albany, N. Y.

Ryman, H. M., New York, N. Y.; Rogers, A. W., Cleveland, Ohio.; Reik, H. O., Baltimore, Md.

St. Charles Condensing Co., St. Charles, Ohio; Schieffelin & Co., New York, N. Y.; Smith, B. M., Davis, W. Va.

Thomas, John D., Washington, D. C.

Williamson, J. H., Pittsburg, Pa.; Wheat, Lewis, Richmond, Va.; Walker, A. B., Canton, Ohio; Whittaker, Alfred, E., Boulder, Colo.

Young, Amos S., Weston, Mich.